



# Environmental Science Education Products



Classroom • Outdoor Monitoring • Field • Classroom • Outdoor Monitoring • Field

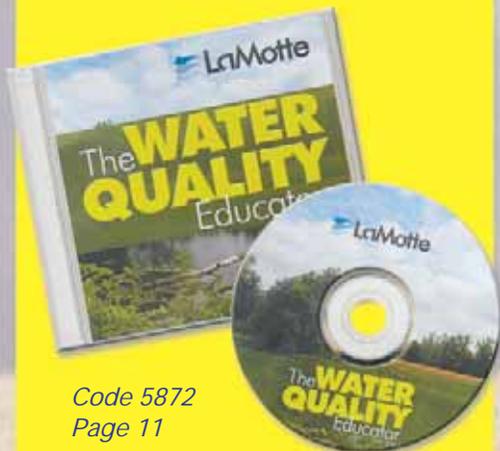
# 2010

## CDs & DVDs

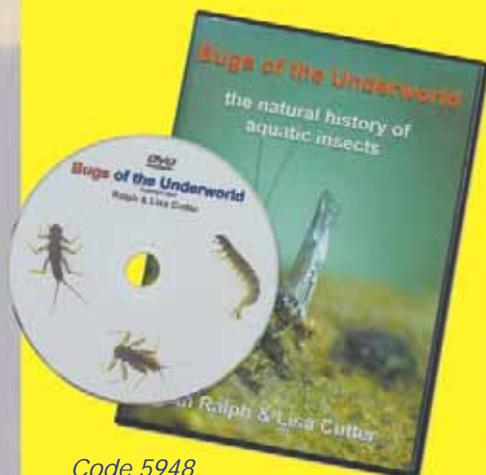
To help you  
in the classroom!



Code 5925  
Page 7



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Code 5948  
Page 10

# Got Data... Get a Link!

## Link up!

**Popular and economical GREEN/Earth Force kits** (page 6) make it simple for young people to become active citizens and investigate the water quality of their watershed, estuary or marine ecosystem, identify the underlying issues in the community, and take action to resolve the problem. The Earth Force web site provides a place to share their success story, find out about local programs and to compete for valuable school and teacher awards.  
[www.earthforce.org](http://www.earthforce.org)

If macroinvertebrates are your thing, **The Leaf Pack Experiments Stream Ecology Kit** (page 8) is for you. With this complete kit students design an experiment to discover the value of macroinvertebrates as living indicators of water quality. Enter the data from your school on the Leaf Pack Network® to better understand the critical role of stream side forests to river and stream ecosystems.  
[www.stroudcenter.org](http://www.stroudcenter.org)

**GLOBE (Global Learning and Observation to Benefit the Environment)**: a hands-on, primary and secondary school-based science and education program which unites students, teachers, scientists and community members around the world in study and research about the dynamics of Earth's environment. The GLOBE Schools Network consists of over a million GLOBE students in more than 20,000 schools located in 109 countries. GLOBE students have reported over 17 million measurements.  
[www.globe.gov](http://www.globe.gov)

The rugged **Water Quality Monitoring Outfit** (page 11) goes out into the field to measure crucial water quality parameters. The companion Monitor's Handbook and expanded Water Quality Educator CD are there when you get back inside to guide you through the process of evaluating the data and drawing a conclusion about the health of your waterway based on chemical and macroinvertebrate results.

**LaMotte's classroom Tour series** (page 26) includes reference materials and introductory background lecture material so that students can analyze their data and really understand how the results relate to their lives whether the samples are from local pond, tap water, or soil, or from virtual watersheds or shorelines. All without leaving the classroom!

**LaMotte Company is here to serve you.** Don't forget to visit [www.lamotte.com](http://www.lamotte.com) to see what's happening in the Environmental Education & Monitoring New Products section. Valuable resources on the web site include teacher developed lesson plans, aids and links for writing grants, background information and advice for starting a water monitoring program. If you currently use LaMotte products in your classroom the web site will also provide practical information on lot numbers, shelf life, refills and tech tips. Complete downloadable instructions and MSDS are at your fingertips. We can even design custom kits for your monitoring program!

*David H. LaMotte*  
President, LaMotte Company

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## Shipping Codes & Weight

Shipping codes and weights for shipping are included in this catalog for your convenience. The shipping code will refer to one of the following in the chart below. Weights will be in pounds and enclosed in ( ).

<b>NH</b> Non Hazardous No Fees	<b>HF</b> Hazardous Materials Air & Ground Fees
<b>R1</b> Small Quantity Hazardous Materials No Fees	<b>R2 &amp; R3</b> Hazardous Materials Air Fees Only



*This catalog is made from recycled paper. Please recycle catalogs.*



**WARNING:** Products in this catalog are not toys. Adult supervision is strongly recommended. Products may contain ingredients which require additional safety precautions; refer to all safety guidelines and Material Safety Data Sheets at [www.lamotte.com](http://www.lamotte.com).

LEAD (Pb) weights are used in some water samplers and hydrometers. Weights should not be handled by children under 14. Adult supervision recommended.



AP is a trademark of the College Entrance Examination Board, which does not imply endorsement of these products.

## Colorimetric:

Colorimetric means to measure color. Reagents are added to a sample resulting in a reaction that produces a color, the intensity of which is related to the concentration of the test factor. The test factor concentration is then determined by measuring the color, either visually or electronically.

### Visual Methods

Octa-Slide and Octet Comparators feature eight color standards with built-in filters that eliminate optical distortion. Some tests include an Axial Reader attachment that uses a mirror to extend the view path and intensify faint colors in low concentrations. Laminated color charts offer an inexpensive means of measuring color, and are often used with tablet methods and test strips.

### Electronic Methods

Electronic colorimeters or spectrophotometers help eliminate visual inconsistencies and provide a dedicated light source. The light source passes through a sample and is then measured by a photodetector. The results are translated to a digital output in ppm, %T or Absorbance.



## Titrimetric:

Titrimetric analyses are conducted by adding a solution of known strength (the titrant) to a specific volume of a sample in the presence of an indicator. The indicator produces a color change, which shows that the reaction is complete. The following methods are most often used in environmental education.

### Dropper Bottle/Pipet

A pipet or special dropper tip fitted onto the reagent bottle is used to deliver a consistent standard drop size. The number of drops used to complete the reaction in the treated sample is multiplied by a given factor to produce the test result.

### Direct Reading Titrator

The Direct Reading Titrator is a 1.0 mL microburet calibrated to allow direct reading of test results. Each titrator has a specific range, but may be refilled to test higher concentrations.

## Electronic Meter/Probe:

Electronic methods generally use a special electrode for measuring a specific test factor. An electrode is immersed into a sample, and an amplified current or voltage is produced and translated into a digital readout.



## Safety

Have questions about the use of any LaMotte testing or sampling product? Call LaMotte's knowledgeable Technical Service Department at 800-344-3100. Follow all field and laboratory safety guidelines as mandated by your school, center, or education/citizen monitoring program. Specific instructions are provided with each LaMotte test kit and sampling equipment. Be sure to follow these carefully.

Some reagents (or specific volumes of reagents), as determined by federal and state government safety and regulatory agencies, require access to a Material Safety Data Sheet. To view or print a MSDS for these reagents go to [www.lamotte.com](http://www.lamotte.com). To obtain a printed copy contact us by email, phone or fax. Follow all safety precautions and procedures as specified on the MSDS.

Additional information for all LaMotte reagents is available in the United States, Canada, Puerto Rico, and the US Virgin Islands from Chem-Tel by calling 1-800-255-3924. For all other areas, call 813-248-0585 collect to contact Chem-Tel's International access number. Each reagent can be identified by the 4-digit number listed on the upper left corner of the reagent label, in the contents list, and in the test procedures.



**WARNING:** Products in this catalog are not toys. Adult supervision is strongly recommended. Products may contain ingredients which require additional safety precautions; refer to all safety guidelines and Material Safety Data Sheets at: [www.lamotte.com](http://www.lamotte.com).

LEAD (Pb) weights are used in some water samplers and hydrometers. Weights should not be handled by children under 14. Adult supervision recommended.

# The GLOBE Program®

"GLOBE is the quintessentially ideal program for involving kids in science."

— Nobel laureate Dr. Leon Leferman



The GLOBE Program

GLOBE (Global Learning and Observation to Benefit the Environment): a hands-on, primary and secondary school-based science and education program which unites students, teachers, scientists and community members around the world in study and research about the dynamics of Earth's environment.

The GLOBE Schools Network consists of over a million GLOBE students in more than 20,000 schools located in 109 countries. GLOBE students have reported over 17 million measurements.



Code 3-5880

[www.globe.gov](http://www.globe.gov)

## LaMotte Products for Hydrology & Soil GLOBE Program®

GLOBE Item	Description	LaMotte Code	Shipping	Price
100 mL Graduated Cylinder	100 mL Graduated Cylinder	2-2079	NH (1)	\$24.20
500 mL Graduated Cylinder	500 mL Graduated Cylinder	2-2081	NH (1)	41.65
Alkalinity Kit	Water Alkalinity Kit	4491-DR	NH (1)	32.79
Calibration Solution 718 ( $\mu\text{mhos/cm}$ ), 120 mL	Conductivity Standard	6417-J	NH (1)	8.05
Conductivity Meter	Con 6 Meter	5-0039-01	NH (3)	39.00
Conductivity Tester	EC Tester	5-0082	NH (1)	81.00
Conductivity Tester	pH/Conductivity/Temp TRACER	1766	NH (1)	143.00
D-Net	D-Net with pole, 500 micron mesh	0168	NH (7)	62.00
Dissolved Oxygen Kit	Dissolved Oxygen Kit (liquid rgts)	5860	R1 (2)	49.95
Hydrometer Kit	Hydrometer and Jar	3-0025	NH (2)	55.55
Hydrometer Jar	Hydrometer Jar	3-0024	NH (1)	23.90
Hydrometer	Hydrometer	3-0011	NH (1)	35.35
Kick Net	Kick Net, 500 micron mesh	0021	NH (4)	64.50
Macroinvertebrate Classroom Activity	Macro Mania	5942	NH (2)	46.00
Macroinvertebrate Identification Key Insect Identification Flashcards	Freshwater Aquatic Macroinvertebrate:	5882-SA1	NH (1)	46.00
Macroinvertebrate Identification Key Insect Life Cycle & Habitat Flashcards	Freshwater Aquatic Macroinvertebrate:	5946	NH (1)	49.95
Macroinvertebrate Identification Key Waterproof Illustrated Sorting Sheets	Macroinvertebrate Identification:	5882-SS6	NH (1)	36.70
Macroinvertebrate Sorting Dishes	Petri Dish, 25/bag	31648-25	NH (1)	9.70
Nitrate Kit (Cadmium)	Nitrate-Nitrogen 0.2 to 1.0 ppm	3615	R1 (2)	76.50
Nitrate Standard	1000 ppm $\text{NO}_3\text{-N}$ , 50 mL	5392-H	NH (1)	10.60
pH 4 Buffer	pH 4.0 Buffer, 120 mL	2866-J	NH (1)	8.45
pH 7 Buffer	pH 7.0 Buffer, 120 mL	2881-J	NH (1)	8.35
pH 10 Buffer	pH 10.0 Buffer, 120 mL	2896-J	NH (1)	8.35
pH Meter	pH 5 Meter	5-0034	NH (3)	279.75
pH PockeTester	pH 20 PockeTester	5-0104	NH (1)	107.50
pH Tester	pH/Conductivity/Temp TRACER	1766	NH (1)	143.00
pH Test Strips	pH Test Strips, 100 strips	3-2950	NH (1)	21.15
Salinity Kit	Salinity Kit	7459-01	R1 (1)	57.25
Secchi Disk, Rope	Secchi Disk with Line	0171-CL	NH (7)	56.00
Soil Dispersing**	Soil Dispersing Reagent, 250 g	5184-K	NH (2)	33.00
Soil NPK Kit**	Soil Nitrate, Phosphorus, and Potassium Kit	3-5880	NH (1)	26.00
TDS Meter	TDS 6 Meter	5-0036-01	NH (3)	310.95
Thermometer, Armored*	Calibrated Thermometer, $-5^\circ$ to $45^\circ\text{C}$	1066	NH (1)	21.50

\*Discount on orders of 10 units, \$14.70 each \*\*Designed for the GLOBE program

LaMotte Company 800-344-3100 [www.lamotte.com](http://www.lamotte.com)



## GREEN Low Cost Water Monitoring Kit

Ages 8 and up

Order Code 3-5886 \$35.00 NH (1)

- Designed as a sampler that is a great introduction to any water quality monitoring program. This kit provides hands-on methods using TesTabs® for brackish, fresh or ocean waters. For long term monitoring, consider the Green Standard Water Monitoring kit, Code 5848. Both kits are ideal for volunteer monitoring, too!
- 8 different test factors: pH, dissolved oxygen, biochemical oxygen demand, temperature, turbidity, nitrate, phosphate, and coliform bacteria
- manual with step-by-step diagrammed instructions in both English and Spanish
- safe, non-hazardous TesTabs® to test 10 water samples (3 for coliform)
- laminated color chart
- 20-pack case available

### You Might Also Like:

*Wet Your Waders pg. 7*  
*Coliquant MF pg. 21*  
*Teach Water Kit pg. 30*  
*Tapwater Tour pg. 27*  
*Water Treatment Lab pg. 29*  
*Funky Faucet pg. 30*  
*Science Project Kits pg. 31*



Code 3-5886

## EARTH FORCE Elementary Education Watershed Field Trip Kit

Grades 1-5/30 students

Order Code 5906 \$61.25 NH (1)

Everything you need to lead your classroom on a fun-filled exploration of a watershed. This kit tells The Watershed Story: an excellent explanation of a watershed and how it relates to nature around us.

- teacher's manual with guidelines on taking a field trip and conducting water quality tests
- perform an actual field study
- data sheets to reproduce
- tests for pH, nitrate, phosphate, and dissolved oxygen using non-hazardous TesTabs®
- includes all reagents and accessories and one activity from Project WET



Code 5906

For more information on the  
Earth Force/GREEN program

[www.earthforce.org](http://www.earthforce.org)

## GREEN Low Cost Estuary & Marine Monitoring Kit

Ages 8 and up

Order Code 5911 \$46.00 NH (1)

Designed to provide simple, economical, and non-hazardous methods for testing saline and brackish water.

- same tests as the GREEN Low Cost Water Monitoring
- kit with an additional test for chloride (10) and only two tests for coliform
- 20-pack case available



Code 5911

You Might Also Like:  
Wet Your Waders pg. 7



Code 5848



## GREEN Standard Water Monitoring Kit

Grades 4 and up.

Order Code 5848 \$212.00 NH (7)

Design and implement a river study—from acquiring and reading watershed maps to determining and scheduling study sites. Ideal for community groups/volunteer monitoring. Great teacher resource!

### Test Modules Also Sold Individually

Factor	Code	Shipping	Price
Biochemical Oxygen Demand	5889	NH	\$29.50
Coliform Bacteria	5850	NH	88.40
Dissolved Oxygen	5889	NH	29.50
Nitrate	5891	NH	24.50
pH	5890	NH	20.50
Phosphate	5892	NH	21.50
Turbidity	5887	NH	29.50
Temperature (0-12°C)	31821	NH	2.70
Temperature (14-40°C)	31822	NH	2.70

- 9 test factor modules
- macroinvertebrate bonus module
- instruction manual in both English and Spanish
- each module contains easy-to-read diagrammed instructions
- laminated color chart and instruction flashcards
- test factor flashcard
- all necessary apparatus
- non-hazardous TesTabs® to perform 100 tests (44 tests for coliform bacteria; unlimited for benthic macroinvertebrates and turbidity)



## GREEN Advanced Water Monitoring Kit

Grade 7 and up

Order Code 5884 \$510.00 HF (15)

Contains all the LaMotte water quality test kits featured and supported in the Field Manual for Water Quality Monitoring (13th edition) by Mitchell & Stapp, which is the standard text for school-based water quality monitoring programs.

### Test Kits Included

Factor	Code	Shipping
Dissolved Oxygen	5860	R1
Precision pH	5858	R1
Phosphate	3121-01	R1
Auxiliary Phosphate	7884	HF
Nitrate-Nitrogen	3110	R1
Turbidity	7519	N
Thermometer	1066	NH
Field Manual For Water Quality Monitoring (Mitchell & Stapp)	3-1508	NH

See Individual Test Kit section in Water Quality Monitoring section for kit pricing.



Code 5884

## Wet Your Waders

Grades 5 and up

Order Code 5929 \$47.00 NH (1)

A unique companion CD-ROM to the GREEN Standard Water Monitoring Kit (Code 5848) or any kits using TesTabs®. Take a virtual tour prior to field sampling and testing. Students select a location from an on-screen map and select water quality and macroinvertebrate techniques that will be used in the field. QuickTime® Virtual Reality transports students to the area they have selected on the watershed and provides a 360 degree view. Students learn the importance of their chosen test and then perform the technique through interactive procedures. A great pre-lab training tool, this interactive CD-ROM is an ideal choice for any class or monitoring group using tablet methods. For Macintosh 8.1 or higher; Windows 95 or higher.



Code 5929

**GREAT Teacher Resource!**

You Might Also Like:  
GREEN Low Cost Kit pg. 6  
GREEN Low Cost Estuary Kit pg. 6  
GREEN Standard Kit pg. 7  
EARTH FORCE Watershed Field Trip pg. 6

EARTH FORCE  
GREEN



# Aquatic Macroinvertebrates



## Leaf Pack Experiments Stream Ecology Kit

Students of all ages!

Order Code 5882 \$198.00 NH (10)

Got bugs in your stream? This complete kit helps students discover the value of macroinvertebrates as living indicators of water quality. A totally reusable and flexible tool, this kit can be adapted for varying time limits, number of students, and grade levels.

- all apparatus included for collecting, sorting, bioindex, calculation, and identification
- comprehensive instructor's manual includes:
  - reference guide
  - background material on
  - stream ecology experiment ideas
  - field & data sheets to reproduce
  - glossary
  - diagrammed instructions



Code 5882

Developed in cooperation with



### Individual Items Available

Code	Qty	Description	Price
5882-LPB	30	Mesh bags	\$20.50
5882-SA1	1 set	18 full-color Freshwater Aquatic Macroinvertebrate: Insect Identification Flashcards each with photos, line drawings, and identification tips (see page 9)	41.00
5882-SS6	6	Waterproof illustrated sorting sheets	36.70
5946	1 set	22-full color Freshwater Aquatic Macroinvertebrate: Insect Life Cycle & Habitat Flashcards. Includes activities. (see page 9)	49.95
5508	1	MacroLens, 4 inch diameter, 5X magnification (see page 9)	13.00

### Kit Includes

6	Mesh bags
1	Waterproof marker
1	Strainer
14	Sorting trays
60	Plastic Petri dishes
6 sorting sheets	Waterproof illustrated sheets
2	Thermometers
1	Hand-held scale
12	Brushes
12	Spoons
1 set	18 full color flashcards
6	Hand lenses
1	MacroLens™ magnifier
1	Nylon twine
6	Zipper-top bags
1	Tree Finder booklet
1	Instructor's manual with record sheets
2	Rulers
6	Waterproof tags

### You Might Also Like:

- D-Net pg. 24*
- Kick Nets pg. 24*

Code 5882-SA1





## Aquatic Macroinvertebrate Insect Identification Flashcards

For all ages

Order Code 5882-SA1 \$41.00 NH (1)

Use this set of 18 full color flash cards alone or as an addition to any macroinvertebrate activity. (Included in the Leaf Pack Experiments Stream Ecology Kit, see pg. 6). The front of each card features a full-color photograph of a common macroinvertebrate in its natural environment. A list of dichotomous characteristics, a measuring scale, and detailed drawings on the back of each card aid in the identification process. Helpful notes prevent confusion between macroinvertebrates with a similar appearance. A hole can be punched in the wide border of the laminated cards so they can be organized on a ring for field or classroom use.

Wide border to hole punch and hook together



Code 5882-SA1

Developed in cooperation with



www.stroudcenter.org



## Aquatic Macroinvertebrate Insect Life Cycle & Habitat Flashcards

Order Code 5946 \$49.95 NH (1)

Help kids understand the life cycle and habitats of freshwater aquatic macroinvertebrates with this set of flashcards and manual. The 22 full-color cards feature photos of both immature and adult insect stages, and detailed life cycle and habitat information. The accompanying manual contains facts on insect characteristics, life cycles, taxonomy, classification, food webs, and how macroinvertebrates can be indicators of water quality. Six activities are included with the cards. The Freshwater Aquatic Macroinvertebrate: Insect Life Cycle and Habitat Flashcards can be used as an extension to the Freshwater Aquatic Macroinvertebrate: Identification Flashcards and The Leaf Pack Experiments Stream Ecology Kit.

Laminated & Waterproof!



Code 5946

## The Water Quality Educator

Order Code 5872 \$49.95 NH (1)

Teach your students and volunteer monitors all about natural water quality monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included—chemical, microbiological, and macroinvertebrate, standard methods—safety, testing hints, and interpreting results.



NEW Edition!

Code 5872

## MacroLens™

Ages 8 and up

Order Code 5508 \$13.00 NH (1)

10 pack 117.00 NH (6)

Order Code 5508-10

MacroLens with 5X magnification covers the entire petri dish! 4" diameter.

Fits over Petri Dish



Code 5508



Code 5942

Developed in cooperation with



## Macro Mania

Grades 3 and up

Order Code 5942 \$46.00 NH (1)

**GREAT Introduction to macro studies!**

Expansion kit  
(includes 3 decks, 3 sorting sheets)

Order Code 5943 \$17.50 NH (1)

Macro Mania is a classroom adventure that introduces the use of stream macroinvertebrates to determine water quality. Lecture material sets the scene for the activity. Students will learn about the influence of land use on water quality and the practice of macroinvertebrate sampling to measure water quality. Six teams will be given a deck of macroinvertebrate cards representing a sample of macroinvertebrates from one of three sites, a poster-sized sorting sheet and a map. By sorting the deck of cards onto the sorting sheets, students will determine the water quality at their site from the distribution of macroinvertebrates in their sample. Optional math, public speaking, writing, art and card game extensions will further emphasize the land use/water quality connection. Includes a deck of cards and sorting sheets for six teams. Also includes Macro Mania manual containing background information, step-by-step instructions for activities and extensions. Colorful Macro Mania classroom poster is also included!

## Bugs of the Underworld

Ages 8 and up

Order Code 5948 \$29.95 NH (1)

A 35 minute DVD film showing the real lives of benthic macroinvertebrates in the wild. The secret lives of macros, such as mayflies, damselflies, midges, caddisflies, and stoneflies are revealed for the first time. This film could easily fit into a Discovery Channel, PBS, or Animal Planet lineup and took 11 years and 8 cameras to film. Their transformation into winged adults, particularly when viewed from underwater, is a marvel of grace and beauty. Upon viewing, the universal statement among flyfishers and students is "I didn't know that!" These insects are far more than simply trout bait; they profoundly influence the aquatic ecosystem, and their presence is an accurate measurement of stream health and water quality.

For all grades especially if they are doing water quality studies using macroinvertebrates.

**NEW!**



Code 5948

## Bugkit

Ages 8 and up

Order Code 3-0030 \$21.65 NH (1)

A creepy-crawly, wet investigation into the health of any freshwater environment. Following the easy-to-read manual, one to two students collect, observe, sort, and identify aquatic insects as a guide for establishing water quality. Students complete the activity at home, or spend an afternoon outdoors beside a stream or pond.

- mesh leaf bags for collection
- trays and plastic dishes for sorting
- magnifying lens
- BUGGUIDE—a bug-by-bug description
- BUGBOARD identification chart
- manual, including activities and games



Code 3-0030



# The Water Quality Educator & Monitoring Outfit

Grades 5 and up

## The Monitor's Handbook

A Reference Guide for Natural Water Monitoring. Discusses reasons for monitoring, organizational planning, pre-monitoring activities, site selection, extensive descriptions of the physical, biological and chemical factors, equipment, quality data, analysis and presentation.

## The Water Quality Educator CD ROM (PC or MAC)

Teach your students and volunteer monitors all about natural water quality monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included—chemical, microbiological, and macroinvertebrate standard methods—safety, testing hints, and interpreting results. System requirements: Windows®: 64MB available RAM, Windows 98, 2000, XP or Vista. Macintosh®: 128 MB available RAM, OS X 10.1.5, 10.2.6 or 10.3.

## Water Quality Monitoring Outfit

Complete test kits for seven critical water quality test factors. Includes lesson plans for grades 5-8 and 9-12. Can be purchased alone or with *The Monitor's Handbook* & *The Water Quality Educator* CD ROM.

Test Factor	Range (# Tests)	Kit Code	Shipping
pH	pH 3.0-10.5 (100)	5858	R1
Nitrate-Nitrogen	0-15 ppm (50)	3354	NH
Phosphate	0-2.0 ppm (50)	3121-01	R1
Dissolved Oxygen	0-10.0 ppm (50)	5860	R1
Alkalinity, Total	0-200 ppm (50)	4491-DR	NH
Turbidity	0-200 JTU (50)	7519	NH
Temperature	-5° to 45°C	1066	NH
The Water Quality Educator CD ROM (not sold individually)			
<i>The Monitor's Handbook</i> (see page 48)			

Macintosh and QuickTime are registered trademarks of Apple Computer, Inc.

The Water Quality Educator & Monitoring Outfit (Test kits, *The Monitor's Handbook*, and CD-ROM) **Order Code 5870**  
\$389.00 R3 (14)

Reagent Refill For 5870 & 5871 **Order Code R-5870**  
\$97.00 R3 (3)

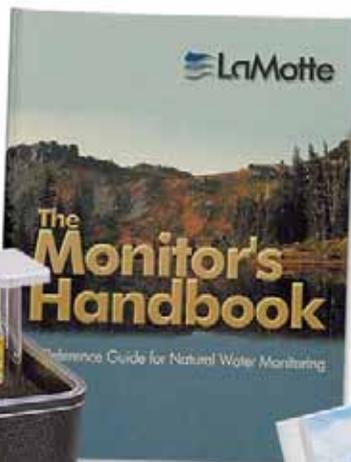
*The Monitor's Handbook* & CD-ROM only **Order Code 5872**  
\$49.95 NH (2)

The Water Quality Monitoring Outfit (Test kits in case only) **Order Code 5871**  
\$369.00 R3 (12)

**Start a monitoring program!**



Code 5870



**NEW Edition!**

Water Monitoring

# Water Monitoring



Code 5903-01

## Marine Science Outfit

Grades 5 and up

Order Code 5903-02      \$435.00    HF (13)

Reagent Refills R-5903-02      145.00    HF (4)

Perfect for testing and studying saline systems (oceans, bays, salt marshes) and brackish water.

- individual test modules for 7 key salt water test factors
- water sampling bottles
- data sheets
- three handbooks: *A Laboratory Manual for Marine Science*, *Limnology*, and *Investigating Water Problems*

### Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
pH	7.7-8.4 (100)	2081-01	R1
pH	3-10.5 (100)	5858	R1

### Titration Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Dissolved Oxygen	0-10.0 ppm (50)	7414	R3
Hardness	0-200 ppm (50)	4824-DR-LT	R1
Carbon Dioxide	0-50 ppm (50)	7297-DR	R1
Alkalinity	0-200 ppm (50)	4533-DR	R1
Salinity	0-20 ppt (50)	7459-01	R1



## Urban Water Test Kit

Grades 3 and up

Order Code 5918    \$42.00    NH (1)

Test tap water from any source and study the impact of urban water on the city's environment. "Wet in the City," a hands-on kit, introduces the basic concepts of water chemistry—even to kids as young as third grade! Non-hazardous TesTabs® make "Wet in the City" an easy and safe kit that's also portable! Contains a comprehensive handbook and all necessary equipment to test for the following factors, 10 repetitions each, 5 for coliform bacteria.

Chlorine	Nitrate
Copper	pH
Dissolved Oxygen	Phosphate
Hardness	Temperature
Iron	Coliform Bacteria



Code 5918

### You Might Also Like:

- Coliquant* pg. 21
- Teach Water Kit* pg. 20
- Tapwater Tour* pg. 27
- Classroom Studies* pg. 29
- Funky Faucet* pg. 30

## Acid Rain Study Outfit

Grades 5 and up

Order Code 3604                      \$58.25    R1 (3)

Reagent Refills 2218-G            6.10    R1(1)

Collect precipitation and determine the pH levels of ponds, lakes and streams with this complete outfit—a valuable unit for any environmental science program.

- durable, tapered rain gauge
- easy-to-use pH test kit
- comprehensive study guide
- activity sheets
- 50 tests



Code 3604

## Limnology Outfit

Grades 5 and up

Order Code 5902-01                \$435.00    HF (13)

Reagent Refill R-5902-01        139.00    HF (4)

This field-friendly outfit contains all that is needed for testing and studying freshwater systems.

- individual test modules for 7 freshwater test factors
- water sampling bottles
- three handbooks: *Limnology, A Study of Water Quality, and Investigating Water Problems*
- data sheets



Code 5902-01

### Direct Reading Titrator Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Nitrate Nitrogen	0.2-1.0 ppm (40)	3119	R3
Phosphate	0.2-1.0 ppm (50)	3119	R3
pH	3.0-10.5 pH (100)	5858	R1
Silica	0.5-10 ppm (50)	4463	R1

### Octet Comparator Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Carbon Dioxide	0-50 ppm (50)	7297-DR	R1
Dissolved Oxygen	0-10 ppm (50)	7414	R3
Hardness	0-200 ppm (50)	4824-DR-LT	N





Code 5854-01



## Shallow Water Outfit

Grades 5 and up

Order Code 5854-01 \$225.00 R1 (9)

Reagent Refill R-5854-01 51.00 R1 (2)

Too Shallow for a Secchi Disk? Turbidity is easily measured using a standardized turbidity reagent to match the turbidity of a water sample. All the necessary apparatus and reagents needed to test 4 basic water quality test factors are included. Economical reagent refill packages are available.

Factor	Test Method	Range/Sensitivity
Temperature	Thermometer	-5° to 45° C/0.5 increments
pH	2 Octet Comparators	pH 3.0-10.5/0.5 increments
Turbidity	Drop Count	0-200 JTU/5 JTU increments
Dissolved Oxygen	Direct Reading Titrator	0-10 ppm O <sub>2</sub> /0.2 ppm increments

## Deep Water Outfit

Grades 5 and up

Order Code 5855 \$275.00 R1 (8)

Reagent Refill R-5855 41.85 R1 (8)

Go Deep! Ideal for testing vertical "layers," stratified lakes, or for performing a comprehensive survey of deep waters. Turbidity is measured by "Secchi depth," using a 20 cm diameter, black and white Secchi disk and calibrated line. All the necessary apparatus and reagents to test 4 basic water quality factors and detailed instructions are included. Economical reagent refill packages are available.

Factor	Test Method	Range/Sensitivity
Temperature	Thermometer	-5° to 45° C/0.5 increments
pH	2 Octet Comparators	pH 3.0-10.5/0.5 increments
Secchi depth	Secchi Disk	0-20 m/0.5m increments
Dissolved Oxygen	Direct Reading Titrator	0-10 ppm O <sub>2</sub> /0.2 ppm increments

WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.



Code 5855

## Tidal Water Outfit

Grades 5 and up

Order Code 5857 \$338.00 R1 (10)

Reagent Refill R-5857 41.85 R1 (3)

Compare specific gravity of varying concentrations of salt water to freshwater by using a hydrometer and a clear, acrylic hydrometer jar. Turbidity is measured by "Secchi depth", using a 20 cm diameter, black and white Secchi disk and calibrated line. All the necessary apparatus, reagents, and detailed instructions to test 5 basic water quality test factors are included. All fit securely within a foam insert and are housed in a rugged field carrying case. Economical reagent refill package available.

Factor	Test Method	Range/Sensitivity
Dissolved Oxygen	Direct Reading Titrator	0-10 ppm O <sub>2</sub> /0.2 ppm increments
Temperature	Thermometer	-5° to 45° C/0.5 increments
pH	2 Octet Comparators	pH 3.0-10.5/0.5 increments

Factor	Test Method	Range/Sensitivity
Secchi depth	Secchi Disk	0-20 m/0.5m increments
Salinity	Hydrometer	1.0000 to 1.0700 SG/0.0005 increments; 0.0 ppt to 43.6 ppt salinity/0.2 ppt increments

WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.



Code 5857

**Individual Modules!**

## AM-12 • The TesTabs® Water Investigation Kit

Grades 5 and up

Order Code 5849 \$212.00 R1 (7)

- Investigate water pollution using LaMotte's safe, simple, TesTabs® reagents.
- 12 individual test modules
  - easy-to-read, diagrammed instructions
  - color charts
  - test factor flashcards
  - all necessary apparatus
    - non-hazardous TesTabs® to perform
    - 100 tests
    - *The Monitor's Handbook*



Code 5849



Factor	Code	Shipping	Price
Alkalinity	5893	NH	\$30.75
Ammonia	5894	R1	26.50
Chloride	5895	NH	26.50
Chlorine	5896	NH	20.50
Chromium	5897	NH	23.50
Copper	5898	NH	19.00
Dissolved Oxygen/BOD	5889	NH	29.50
Hardness	5899	NH	45.90
Iron	5900	NH	23.50
Nitrate	5891	NH	24.50
pH	5890	NH	20.50
Phosphate	5892	NH	21.50

## Water Pollution Introductory Outfit

Grades 5 and up

Order Code 5905-01 \$485.00 HF (14)

Reagent Refill R-5905-01 268.00 HF (6)

Designed to introduce concepts of water pollution detection, this versatile kit includes everything you need for a classroom demonstration.

- 16 water quality factors: alkalinity, ammonia, carbon dioxide, chloride, chlorine, chromium, copper, cyanide, total dissolved solids, hardness, iron, nitrate, pH, phosphate, salinity and sulfide
- reagents for 20-30 demonstrations of each factor
- procedures can also be performed in 3-cell and 6-cell inert plastic demonstration stages that permit magnification of colorful test reactions with an overhead projector/field test procedures and manual
- test report forms
- two handbooks: *Our Environment Battles Water Pollution*; *Investigating Water Problems*

**Classroom Demo!**



Code 5905-01



Code 5917-01

## Water Pollution 1

Grades 5 and up

Order Code 5917-01 \$561.00 HF (18)

Reagent Refill R-5917-01 226.00 HF (7)

Ideal for examining water quality in known or suspected polluted aquatic environments.

- individual test modules for 11 key test factors
- complete instructions
- reagents to perform 50 tests for each factor
- all necessary apparatus
- three handbooks: *A Study of Water Quality*, *Our Environment Battles Water Pollution*, and *Investigating Water Problems*
- rugged field carrying case

### Titration Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Dissolved Oxygen	0-10.0 ppm (50)	7414	R3
Hardness	0-200 ppm (50)	4824-DR-LT	R1
Carbon Dioxide	0-50 ppm (50)	7297-DR	R1
Alkalinity	0-200 ppm (50)	4533-DR	NH
Chloride	0-200 ppm, 0-20 ppt (50)	4503-DR-01	R1

### Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
pH	3-10.5 (100)	5858	R1
Nitrate-Nitrogen	0.2-1.0 ppm (40)	3119	R3
Phosphate	0.2-1.0 ppm (50)	3119	R3
Silica	0.5-10 ppm (50)	4463	R1
Ammonia-Nitrogen	1.0-8.0 ppm (50)	4795	R1
Sulfide	0.2-20 ppm (50)	4456	R1

## Water Pollution 2

Grades 5 and up

Order Code 5919 \$585.00 HF (15)

Reagent Refill R-5919 221.00 HF (3)

For more detailed water testing, this kit is an ideal supplement to our Water Pollution 1 outfit.

- 5 key water quality test factors
- data sheets
- three handbooks: *A Study of Water Quality*, *Our Environment Battles Water Pollution*, and *Investigating Water Problems*
- sturdy carrying case

### Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Fluoride	0.2-1.6 ppm (50)	4227-R	NH
Manganese	0.2-3.0 ppm (50)	7518	HF
Sulfate	20-200 ppm (50)	7778	R1N

### Drop Count Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Color, APHA	0-100 units (50)		R2
Turbidity	0-200 JTU (50)	7519	NH

## Water Pollution 3

Grades 5 and up

Order Code 5921-01 \$520.00 R1 (13)

Reagent Refill R-5921-01 139.00 R1 (6)

Is there a pond, stream, or river that you suspect might contain industrial pollution? This is the kit to use!

- individual test modules for 6 key industrial pollutants
- data sheets
- three handbooks: *A Study of Water Quality*, *Our Environment Battles Water Pollution*, and *Investigating Water Problems*
- sturdy carrying case

### Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Chlorine	0.5-5.0 ppm (100)	5910	NH
Chromate	5-40 ppm (50)	4430	R1
Copper	0-0.5 ppm (50)	6616	NH
Iron	0.5-1.0 ppm (100)	4447	R1
Zinc	0-10 ppm (50)	7391-01	R1

### Drop Count Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Cyanide	0.05 ppm/drop (50)	7387-01	R1



**Economical Refills!**



Code 3308

# Water Monitoring

## Individual Test Kits

Test Factor	Order Code	Test System	Range/Resolution	# of Tests (# Reagents)	Shipping	Price
Acidity	7182	HCl, H <sub>2</sub> SO <sub>4</sub> , H <sub>3</sub> PO <sub>4</sub> Drop Count	1 drop = 0.1 or 1.0% (as the particular acid)	50 at 10% (2)	R1 (1)	\$35.20
Algae	6662	Filter/extraction	Presence/absence	50 (1)	HF (2)	137.75
Alkalinity	5893	Total Alkalinity Add Tablet TesTabs®	1 tablet = 40 ppm	100 (1)	NH (1)	30.75
	4491-DR	Total Alkalinity	Direct Reading Titrator 0-200 ppm/4 ppm as CaCO <sub>3</sub>	50 at 200 ppm (2)	NH (1)	32.79
	4533-DR	P & T Alkalinity Direct Reading Titrator	0-200 ppm/4 ppm as CaCO <sub>3</sub>	50 at 200 ppm (3)	NH (1)	46.80
Ammonia-Nitrogen	3304	Salicylate Octa-Slide	0.0, 0.05, 0.1, 0.25, 0.5, 1.0, 2.0 ppm NH <sub>3</sub> -N	50 (3)	R2 (1)	72.80
	5864	Salicylate Color Chart	0.0, 0.25, 0.50, 1.0, 2.0, 4.0 ppm NH <sub>3</sub> -N	50 (2)	R1 (1)	55.10
	3315	Nessler Octa-Slide	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 ppm NH <sub>3</sub> -N	50 (2)	R1 (1)	66.85
	5894	Salicylate Color Chart	0, 1, 2, 4 ppm NH <sub>3</sub> -N	100 (2)	R1 (1)	26.50
Arsenic	4053-02	Test Strip	<4, 4, 8, 10, 12, 14, 16, 20, 25, 30, 50, 85, 100, 150, 175, 200, 300, 400 ppb	50	R1 (8)	173.00
<i>Recommended for high school and university use only. Teacher supervision required.</i>						
Bacteria, Coliform	4-3616	Total Coliform LaMotte Tablet	Presence/Absence Drinking Water	1 (1)	NH (1)	13.00
	5850	Total Coliform LaMotte Tablet	Presence/Absence Recreational Water	44 (1)	NH (1)	88.40
	3-0034***	ColiQuant EZ	0-300 CFU/100mL E-coli & Coliforms	10 (1)	NH (2)	35.35
	3-0035***	ColiQuant MF	0-300 CFU/100mL E-coli & Coliforms	20 (1)	NH (3)	60.30
Calcium	3609	Direct Reading Titrator	0-200 ppm/4 ppm CaCO <sub>3</sub> 0-2580 ppm/51.6 ppm CaCO <sub>3</sub>	50 (3)	R1 (1)	43.95
Carbon Dioxide	7297-DR	Direct Reading Titrator	0-50 ppm/1.0 ppm CO <sub>2</sub>	50 at 50 ppm (2)	R1 (1)	35.70
Chloride	4503-DR-01	Direct Reading Titrator	0-200 ppm/4 ppm Cl <sup>-</sup> 0-20,000 ppm/400 ppm Cl <sup>-</sup>	50 at 200 ppm (4)	R1 (1)	42.50
	5895	Turbidimetric Color Chart	0-24,000/ 400 ppm Cl <sup>-</sup>	100 (1)	NH (1)	26.50
Chlorine Free & Total	3308*	DPD Tablet Octa-Slide	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	50 (2)	NH (1)	61.20
	3176-01*†	DPD-FAS Titration Direct Reading Titrator	0-10 ppm/0.2 ppm Cl	50 at 10 ppm (4)	R1 (2)	65.00
	5896	DPD Tablet Color Chart	0, 1, 3, 5 ppm Cl	100 (1)	NH (1)	20.50
Chromium	5897	TesTabs® Color Chart	0, 0.2, 0.4, 0.6 ppm Chromium	100 (1)	NH (1)	23.50
Copper	6616	Octet Comparator with Axial Reader	0, 0.05, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 ppm Cu	50 (1)	NH (1)	81.60
	5898	TesTabs® Color Chart	0, 1.5, 2, 4 ppm Cu	100 (1)	NH (1)	19.00
Cyanide 	7387-01	Octet Comparator	0.0, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40 ppm Free CN <sup>-</sup>	50 (5)	R1 (3)	123.45

Shipping Codes: NH: Non-Hazardous - No Fees R1: Small Qty. Hazardous Materials - No Fees R2 & R3: Hazardous Materials - Air Fees Only HF: Hazardous Materials - Air & Ground Fees

\*(NPDWR) EPA Accepted †(NPDES) EPA Accepted \*\*\*Frozen products/dated goods. Please specify ship date.

# Water Monitoring

Test Factor	Order Code	Test System	Range/Resolution	# of Tests (# Reagents)	Shipping	Price						
Detergents	4507-01	Drop Count	1 drop = 1.0 ppm Detergent	60 at 5.0 ppm (3)	R1 (2)	\$55.00						
Fluoride	4227-R	Octet Comparator with Axial Reader	0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6 ppm F <sup>-</sup>	50 (2)	NH (1)	149.00						
Hardness	4482-DR-LT	Total Hardness Direct Reading Titrator	0-200 ppm/4 ppm CaCO <sub>3</sub>	50 at 200 ppm (3)	R1 (1)	39.95						
	4824-DR-LT	Calcium, Magnesium, & Total Hardness Direct Reading Titrator	0-200 ppm/4 ppm CaCO <sub>3</sub>	50 at 200 ppm (5)	R1 (1)	54.00						
	5899	TesTabs® Add Tablet Color Chart	1 tablet = 40 or 100 ppm	100 (1)	NH (1)	45.90						
Iron	3318	Total Iron Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	90 (2)	R1 (1)	54.70						
	7787	Total Iron Octet Comparator with Axial Reader	0.05, 0.10, 0.20, 0.30, 0.40, 0.60, 0.80, 1.0 ppm Fe	30 (2)	R1 (1)	89.00						
	3347	Ferrous/Ferric Iron Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	85 (3)	R1 (1)	80.95						
	5900	TesTabs® Color Chart	0, 1, 5, 10 ppm Fe	100 (1)	NH (1)	23.50						
Manganese	3588-01	PAN Octet Comparator	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0 ppm Mn	50 (4)	HF (2)	101.80						
Nitrate Nitrogen	3519 (Includes Nitrite)	Cadmium Reduction Octet Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO <sub>3</sub> -N	40 (3)	R1 (1)	95.70						
	3110	Cadmium Reduction Octet Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO <sub>3</sub> -N	40 (2)	R1 (1)	67.60						
GLOBE AP	3615	Cadmium Reduction Octet Comparator with Axial Reader	0, 0.2, 0.4, 0.6, 0.8, 1.0 NO <sub>3</sub> -N	40 (2)	R1 (2)	76.50						
	3354	Zinc Reduction Octa-Slide	0, 1, 2, 4, 6, 8, 10, 15 ppm NO <sub>3</sub> -N	50 (2)	NH (2)	52.00						
	5891	TesTabs®, Zinc reduction Color Chart	0, 5, 20, 40 ppm NO <sub>3</sub>	100 (1)	NH (1)	24.50						
Nitrate/ Phosphate	3119	Cadmium Reduction/ Ascorbic Acid Octet Comparator with Axial Reader	0.2, 0.4, 0.6, 1.0 ppm NO <sub>3</sub> -N	Nitrate: 40 (2) Phosphate: 50 (2)	R3 (2)	83.65						
			0.2, 0.4, 0.6, 1.0 ppm PO <sub>4</sub> <sup>3-</sup>									
GLOBE AP	5860	Winkler All Liquid Reagents Direct Reading Titrator	0-10 ppm/0.2 ppm O <sub>2</sub>	50 at 10 ppm (5)	R1 (2)	49.95						
			AP				7414†	Direct Reading Titrator	0-10 ppm/0.2 ppm O <sub>2</sub>	50 at 10 ppm (5)	R3 (2)	49.95
									GLOBE AP			

Shipping Codes: NH: Non-Hazardous - No Fees R1: Small Qty. Hazardous Materials - No Fees R2 & R3: Hazardous Materials - Air Fees Only HF: Hazardous Materials - Air & Ground Fees  
 \*(NPDWR) EPA Accepted †(NPDES) EPA Accepted



Code 7414

Code 6616

# Water Monitoring



**Economical Refills!**



Code 3322

Test Factor	Order Code	Test System	Range/Resolution	# of Tests (# Reagents)	Shipping	Price	
pH	2109	Bromthymol Blue Octet Comparator	6.0, 6.2, 6.4, 6.6, 6.8, 7.0, 7.2, 7.4	50 (1)	NH (1)	\$31.95	
	2110	Phenol Red Octet Comparator	6.8, 7.0, 7.2, 7.4, 7.6, 7.8, 8.0, 8.2	50 (1)	NH (1)	31.95	
	2111	Cresol Red Octet Comparator	7.2, 7.4, 7.6, 7.8, 8.0, 8.2, 8.4, 8.6	50 (1)	NH (1)	31.95	
	2112	Thymol Blue Octet Comparator	8.0, 8.2, 8.4, 8.6, 8.8, 9.0, 9.2, 9.4	50 (1)	NH (1)	31.95	
	GLOBE AP	5858	Wide Range 2 Octet Comparators	3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5	100 (1)	R1 (1)	36.75
		3-2950	Wide Range Test Strips	4-indicators, 0-14 pH/1.0 pH	100 (1)	NH (1)	21.15
5890		TesTabs® Color Chart	4, 5, 6, 7, 8, 9, 10, 11 pH	100 (1)	NH (1)	20.50	
Phosphate/Nitrate	3119	Ascorbic Acid/ Cadmium Reduction Octet Comparator with Axial Reader	0.2, 0.4, 0.6, 1.0 ppm NO <sub>3</sub> -N 0.2, 0.4, 0.6, 1.0 ppm PO <sub>4</sub> <sup>3-</sup>	Phosphate: 50 (2) Nitrate: 40 (2)	R3 (2)	83.65	
GLOBE AP	3121-01	Ascorbic Acid Octet Comparator with Axial Reader	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm PO <sub>4</sub> <sup>3-</sup>	50 (2)	R1 (1)	78.50	
	7416-01**	Stannous Chloride Octet Comparator with Axial Reader	0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm PO <sub>4</sub> <sup>3-</sup>	50 (2)	R1 (1)	99.65	
	5892	TesTabs® Color Chart	0, 1, 2, 4 ppm PO <sub>4</sub> <sup>3-</sup>	100 (1)	NH (1)	21.50	
Phosphate, Total	7884	Conversion kit, digestion, use with orthophosphate kit for total phosphate measurement, requires heat source (not included).		50 (5)	HF (2)	118.00	
GLOBE AP	7459-01	Direct Reading Titrator	0-40 ppt/0.4 ppt Salinity	50 at 20 ppt (2)	R1 (1)	57.25	
	3-0025	Hydrometer Kit	0-40 ppt Salinity	Unlimited	NH (4)	55.55	
Silica	3321	Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm SiO <sub>2</sub>	50 (4)	R1 (1)	86.90	
Sulfate	7778	Tablet Octet Comparator	0, 20, 50, 80, 120, 160, 200 ppm SO <sub>4</sub> <sup>2-</sup>	50 (1)	R1 (1)	90.40	
Sulfide	3322†	Total Sulfide Octa-Slide	0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 15.0, 20.0 ppm S <sup>2-</sup>	50 (3)	R1 (1)	57.10	
Turbidity	7519	Drop Count	5-100 JTU/5 JTU, 10-200 JTU/10 JTU	50 at 10 or 20 JTU (1)	NH (1)	60.30	
	5887	Turbidimetric	0, 20, 40, 60, 80, 100 JTU	Unlimited	NH (1)	29.50	
Zinc	7391-01	Octet Comparator	0, 1, 2, 3, 4, 6, 8, 10 ppm Zn	50 (2)	NH (1)	82.70	

Shipping Codes: NH: Non-Hazardous - No Fees R1: Small Qty. Hazardous Materials - No Fees R2 & R3: Hazardous Materials - Air Fees Only HF: Hazardous Materials - Air & Ground Fees  
 \*(NPDWR) EPA Accepted †(NPDES) EPA Accepted \*\*Not for use in salt or brackish waters.

# Water Monitoring

## Water Test Strips

LaMotte test strips are a great way to monitor water without having to measure reagents. Strips are available for the factors below... and we're developing even more!



Code 2994

**Non-Hazardous test strips!**

### Single Factor Test Strips

Test Factor	Code	Range (ppm)	Water Testing Application*	# of Tests Per Factor/Per Vial	Values (ppm)	Price
Alkalinity	2997	0-180	Drinking, Food/Beverage, Pool	50	0, 40, 80, 120, 180	\$8.95
Chlorine, Free	2964-G	0-10	Drinking, Food/Beverage, Pool	25	0, 0.25, 0.5, 1, 3, 10	5.40
Chlorine, Total	2979	0-5	Drinking, Food/Beverage	50	0, 0.5, 1, 3, 5	9.00
Hardness, Low Range	2981	0-180	Drinking, Food/Beverage	50	0, 30, 60, 120, 180	9.30
pH, Wide Range	2974	4-10 (pH)	Drinking, Food/Beverage, Pool	50	4, 5, 6, 7, 8, 9, 10	9.15
Phosphate, Low Range	3021-G	0-1000	Drinking, Food/Beverage	25	0, 100, 200, 300, 500, 1000	7.25

### Multi-Factor Test Strips

Test Factor	Code	Range	Water Testing Application*	# of Tests Per Factor/Per Vial	Values (ppm)	Price
Iron & Copper	2994	0-5 (Iron)	Drinking, Pool	25	0, 0.3, 0.5, 1, 3, 50, 0.3, 0.6, 1, 3	\$19.95
		0-3 (Copper)		25		
Iron, pH, & Hardness	2980	0-5 (Iron)	Drinking	25	0, 0.3, 0.5, 1, 3, 54, 5, 6, 7, 8, 9, 100, 50, 100, 200, 400	17.90
		4-10 (pH)		25		
		0-400 (Hard)		25		
Wide Range (pH & Total Chlorine)	2987	4-10 (pH)	Drinking, Food/Beverage, Pool	50	4, 5, 6, 7, 8, 9, 100, 1, 5, 10, 20, 50	9.35
		0-50 (TCI)		50		
Nitrate & Nitrite	2996	0-50 (Nitrate)	Drinking	50	0, 5, 10, 25, 50 (NO <sub>3</sub> -N)0, 0.5, 1, 5, 10 (NO <sub>2</sub> -N)	9.80
		0-10 (Nitrite)		50		

\*Strips shown have been evaluated for use in these applications. Use in other applications is subject to potential interferences. Contact LaMotte Technical Services for more information.

## Teach Water Handbook

Order Code 1509 \$8.85 NH (1)

Filled with creative ideas for using test strips in the classroom. This handbook also provides introductory background for each of the test strip factors, and the importance of these factors in testing drinking water.

- instructions for the use of each test strip: alkalinity, chlorine, copper, hardness, iron, nitrate, nitrite, and pH
- helpful resources
  - top 10 educational websites for additional support material
  - suggested activities regarding water treatment, groundwater formation, and drinking water quality



Code 1509

## Teach Water Kit

Ages 8 and up

Order Code 5927 \$46.00 NH (1)

Ideal for municipal and well water investigations, this combo pack of test strips offers the handbook described to the left and one vial each of alkalinity, chlorine, hardness, pH, and nitrate/nitrite strips (50 strips in each vial).



Code 5927

**You Might Also Like:**  
Pondwater Tour pg. 28

## Bacteria Testing

Micro testing without a macro investment! Welcome to the world of microbes—a brand new product line and technology for your comprehensive water quality program. Count the E. coli and coliforms in your favorite swimming hole. Use for ponds, streams, rivers, lakes, ocean water, tap water.

- patented combination of color-producing nutrients and enzymes that mark E. coli purple-blue, coliforms pink, and other non-coliform bacteria colorless
- easy method of teaching and conducting microbiology testing
- eliminates need for autoclave, water bath, and balance
- saves preparation time
- all materials supplied except water sample
- science activities available
- adds valuable quantitative capability
- EPA approved for outdoor surface water monitoring (ColiQuant EZ) and potable water (ColiQuant MF)

You Might Also Like:  
Total Coliform kits  
pg. 18



Code 3-0034

### ColiQuant EZ\*

Grades 7 and up

Order Code 3-0034 \$35.35 NH (2)

Ideal for sample sizes of 1-5 mL of river water or other samples with many coliforms or E. coli expected. The sample is collected with a sterile bottle, added directly into a bottle of Coliscan® Easygel®, and poured into a pretreated Petri dish. Under warm conditions (32-37°C) results can be ready in 24 hours. 10 tests. Five color charts included.



Code 3-0035



### ColiQuant MF\*

Grades 7 and up

Order Code 3-0035

\$60.30 NH (3)

Refill Package Order Code 3-0036

\$48.90 NH (3)

Ideal for large quantities of potable water or treated wastewater that contains a low level of coliforms or E. coli. Up to 100 mL of water is filtered through a membrane filter and placed on a Coliscan-MF nutrient rich pad in a Petri dish. 20 tests. Refill package contains enough materials to do 20 tests (refill does not include membrane filtration apparatus). Five color charts included.

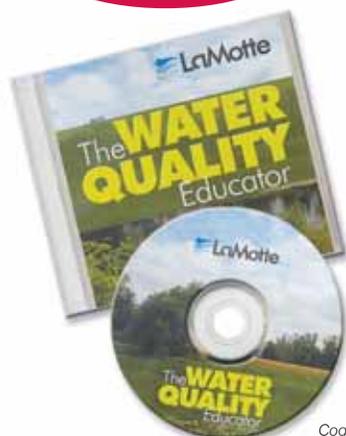
\*Frozen products/dated goods. Please specify ship date.

**NEW Edition!**

## The Water Quality Educator

Order Code 5872 \$49.95 NH (1)

Teach your students and volunteer monitors all about Natural Water Quality Monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included, such as, chemical, microbiological, and macroinvertebrate standard methods, safety, testing hints, and interpreting results.



Code 5872

## MacroLens™

Order Code 5508 \$13.00 NH (1)

10 pack Order 117.00 NH (6)

Code 5508-10

MacroLens with 5X magnification covers the entire petri dish! 4" diameter.



Code 5508

## Dissolved Oxygen/ Temperature Sampler

Order Code 3-0026 \$175.30 NH (5)

Ideal for collecting dissolved oxygen samples at specific depths.

- bottle fills, overflows and flushes more than 3 times to insure a representative sample
- decreasing water pressure prevents exchange of air and water with sample
- interior chamber accommodates our armored thermometer (not included, see page 25) accommodates the same sample bottle used in our popular DO kits use with calibrated line and sounding weight (not included)

Sounding weight and calibrated line unit

Order Code 1064-G \$51.00 NH (4)

Sounding weight only

Order Code 1068 \$17.50 NH (4)

## Dissolved Oxygen Sampler

Order Code 1054-DO

\$110.00 NH (3)

Includes the sample bottle used in our popular Dissolved Oxygen Kits, see page 18.



Code 3-0026

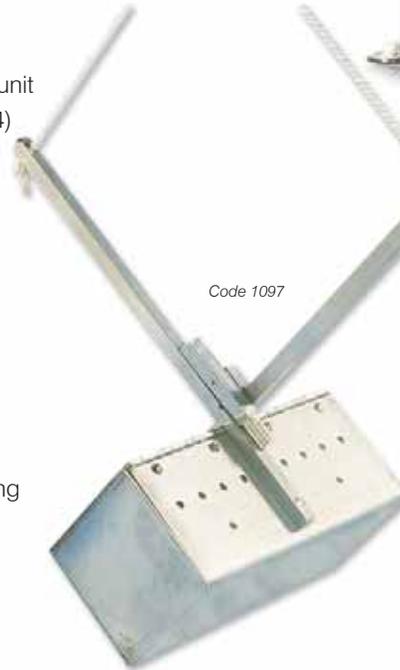
Code 1054-DO

## Bottom Sampling Dredge

Order Code 1097 \$195.00 NH (5)

Need a river bottom sample? Collect it easily!

- stainless steel
- trigger holds the sampler open while lowering
- scissor design closes sampler securely
- 67 cubic inches volume
- designed for soft bottoms (sand or silt)



Code 1097



Code 1069



## Sampling & Measurement Outfit

Grades 5 and up

Order Code 1069 \$479.00 NH (17)

A necessity for any field sampling effort. Durable, reliable sampling gear and measuring devices are housed within a rugged field carrying case for convenient transport and storage.

### Outfit Includes

Description	Code
Stainless Steel Bottom Sampling Dredge	1097
Plankton Net	1063
Sounding Weight and Calibrated Line	1064-G
Armored Thermometer	1066
Water Sampling Bottle	1054-DO
Forel-Ule Color Comparator Kit	5907
Secchi Disk	0171

WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.

### Deluxe Secchi Disks

Order Code 0171-CL \$56.00 NH (7)

Disk w/ black & white quadrants & calibrated line

Order Code 0171 \$26.50 NH (3)

Black & white Secchi (disk only)

Determine turbidity or degree of visibility in natural waters with this weighted 20 cm diameter disk.

- braided line
- marked every half-meter up to 20 meters

 WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.



Code 0717-CL

### Water Sampler

Order Code 1077 \$216.00 NH (9)

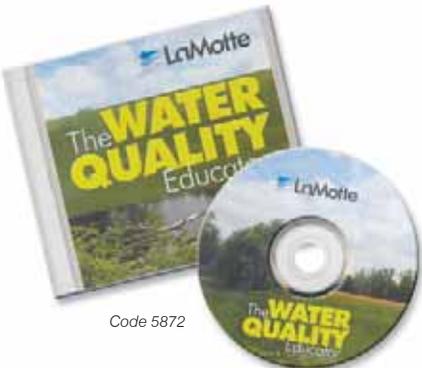
Collect water easily with this one-liter sampler.

- 20 meter calibrated line
- weighted for rapid descent and minimal drift
- sample chamber seals with two fitted plungers
- side outlet and flexible tube allow for removal of the water sample
- recommended for water over 5 meters deep

 WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.



Code 1077



Code 5872

### The Water Quality Educator

Order Code 5872 \$49.95 NH (1)

Teach your students and volunteer monitors all about natural water quality monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included—chemical, microbiological, and macroinvertebrate standard methods—safety, testing hints, and interpreting results.

### The Water Quality Educator CD ROM



# Sampling Equipment



Code 1063

### Plankton Nets

Order Code 1063 \$83.50 NH (2)

15" (38.1cm) tall,  
5" (12.7cm) dia. mouth

Order Code 0023 \$135.00 NH (4)

38" (96.5cm) tall,  
12" (30.4cm) dia. mouth

Collect minute plankton quickly and easily!

- 10 mesh, 153 micron nylon cloth
- clear, conical tube attached at end of the net allows plankton viewing
- net mouth braced by sturdy stainless steel ring and harness

**You Might Also Like:**

- Leaf Pack Kit pg. 8
- BugKit pg. 31
- Macro Flashcards pg. 9
- MacroMania pg. 10



Code 0172

**Student Grade!**

## Student Grade Kick Net

Order Code 0172 \$31.00 NH (2)

This sturdy mesh net is ideal for student macroinvertebrate collection. Durable mesh net measures approximately 35" x 45". Mesh size 1/32". Three inch pockets on opposite sides hold poles in place. Poles not supplied with unit but can be purchased at any local hardware store.



Code 0021-P



## Kick-Net

Kick-Net with poles

Order Code 0021-P \$85.50 NH (8)

Kick-Net Only

Order Code 0021 \$64.50 NH (4)

Performing USEPA Rapid Bioassessment Protocols for benthic macroinvertebrates? You'll need this net!

- 1 x 1 meter square, 500 micron, tan net
- hemmed sides hold poles, reinforced bottom seam helps anchoring



Code 3-0022-P

## Seine Net

Order Code 3-0022-P \$108.45 NH (6)

Seine Net, complete with poles

Order Code 3-0022 \$81.85 NH (3)

Seine net only

Collect aquatic organisms from natural waters from the shoreline to 3' depths. Perfect for fish surveys and educational projects.

- 4' x 12' long, 1/4" mesh
- 36 lb. heavy duty white nylon net
- weighted bottom line and bouyed top line

## D-Net with Expandable Pole

D-Net with Expandable Pole

Order Code 0168 \$62.00 NH (7)

Replacement Bag

Order Code 0167B 13.95 NH (1)

Twelve-inch rim dip net is fitted with a heavy canvas bag approximately 6 1/2" deep. Bag attached to metal frame with clamp rings. Bottom of bag is a mesh material of approximately 500 micron nylon. Canvas skirt extends three inches below bag bottom to protect mesh. Aluminum pole extends from 52" to 84". Ships as UPS oversize. Replacement bags available.

**Retractable Pole!**



Code 0168

## Rain Gauges

### Precision Rain Gauge

Order Code 1048 \$23.70 NH (1)

- Wedge-shaped rain gauge is easy-to-read!
- large 2.5" x 2.3" opening
- precision-molded graduations
- measures 0.5 mm to 150 mm (or 0.01" to 6")
- fasteners are included for post or fence mounting

### Tapered Rain Gauge

Order Code 1047 \$13.50 NH (1)

10" long, durable clear rain gauge.

- tapered to fit a 6" white plastic ground stake (included), for convenient placement and use
- 31mm diameter collection opening
- includes fasteners for post or fence mounting
- measures rainfall of 1.0 mm to 140 mm or 0.1" to 5.5"

Code 1048

Code 1047



Code 5-0020



## Hydrometer

Order Code 3-0011 \$35.35 NH (1)

Precision specific gravity hydrometer for salinity measurement. Use with Hydrometer Jar and Armored Thermometer.

- graduated glass scale in divisions of 0.0005 from 1.0000 to 1.0700 Specific Gravity (SG)
- measures salinity from 0.0 to 43.6 ppt
- each unit checked against NIST certified standard
- supplied in a plastic tube
- table to convert reading to salinity in parts per thousand (ppt)
- 330 mm (13"), scale length is 140 mm (5½"). Use with Hydrometer Jar (Code 3-0024) and Armored Thermometer (Code 1066)

### Hydrometer Jar

Order Code 3-0024 \$23.90 NH (3)

Clear, durable (PMP) cylinder is never slippery—even when wet.

- molded, clear plastic 500 mL cylinder
- broad base for excellent stability

### Hydrometer Kit

Order Code 3-0025 \$55.55 NH (4)

Includes both hydrometer (3-0011) and jar (3-0024).

## Salinity Refractometer

Order Code 5-0020 \$131.50 NH (2)

- Hand-held and easy-to-read!
- specific gravity (SG) and salinity (0/00) scales
- fully automatic temperature compensation over the range of 10° to 30°C
- rapid, accurate determinations require only a drop of sample

Scales:	Specific Gravity, 1.000 to 1.070 Salinity ppt (0/00), 0 to 100 ppt
Resolution:	Specific Gravity to 0.001 Salinity ppt (0/00) to 1 ppt

## Armored Thermometer

Order Code 1066 \$21.50 NH (1)

Discount on orders of 10 units, \$15.05 each

A precision, NON-MERCURY thermometer encased in protective plastic jacket

- window opening
- engraved graduation on white tubing increases readability
- full range of -5° to 45°C in 0.5° increments

Code 1066



**⚠** WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.

Code 3-0011

## The Tour Series

This series of complete, hands-on curricula is designed for elementary and middle-school environmental science education. Each Tour is a unique inquiry-based curriculum. They include lecture materials, illustrated hand-outs, teacher tips, test procedures, TesTabs® reagents and test strips, data sheets, and a variety of word puzzles to reinforce key concepts.

### The Shore Tour

Living Responsibly on the Edge of the Ocean

Grades 3 – 9/40 students

Order Code 5939 \$81.50 NH (5)

Refill R-5939 21.00 NH (1)

Five units teach students through classroom lectures and activities how their everyday actions affect the ocean. Whether they live in an urban, rural or a shore setting, students and their families can do things to help keep ocean and shore ecosystems healthy. Topics include an introduction to coastal ecosystems, energy conservation, pollution, estuaries, beach erosion and restoration, litter, recycling, oil spills, shoreline development and marine debris. Each unit is packed with activities and spotlights a traditional or not so traditional marine career. Real news stories and articles bring the lecture material to life. Includes data sheets and a thought-provoking game to bring it all together at the conclusion of the tour. Help students develop a sense of stewardship toward shores and oceans that will remain with them for the rest of their lives.

#### You Might Also Like:

*Marine Science pg. 12*  
*Salinity Refractometer pg. 25*  
*Hydrometer pg. 25*

- informative lecture material with real life stories
- teacher tested activities from EPA, NOAA and The Marine Mammal Center
- CD with printable handouts, data sheets, and more
- links to activities and information from ocean experts
- complete hands-on curriculum
- step-by-step classroom activities, team data sheets and handouts
- incorporates science, math, language arts, social studies
- spotlights of traditional and non-traditional marine careers
- extensions and “Webquests” for each unit
- links to over 100 ocean-related resources

*No need to leave the classroom!*



Code 5939

 WARNING: This product is not a toy or game, but does contain small parts/pieces that could become a choking hazard.

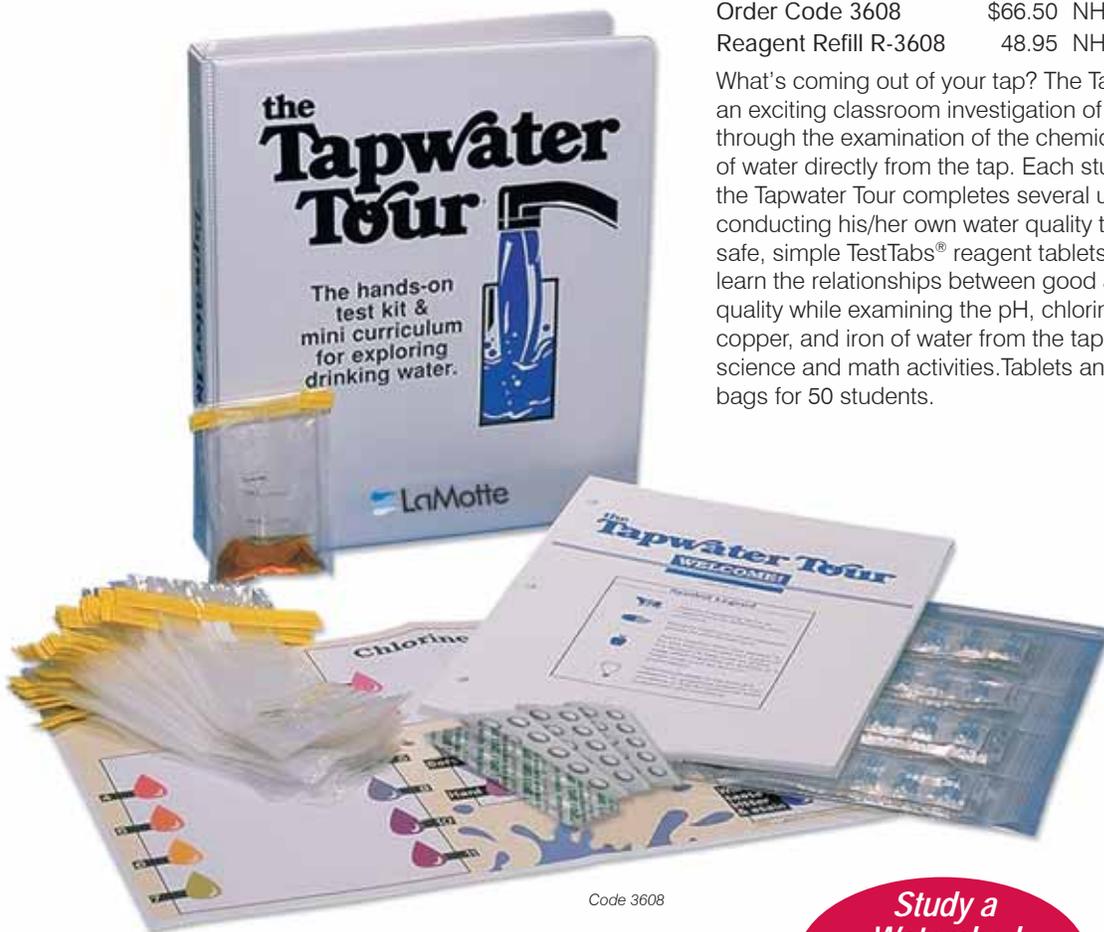
## The Tapwater Tour®

Grades 4-8/50 students

Order Code 3608      \$66.50 NH (4)

Reagent Refill R-3608      48.95 NH (1)

What's coming out of your tap? The Tapwater Tour is an exciting classroom investigation of water quality through the examination of the chemical properties of water directly from the tap. Each student on the Tapwater Tour completes several units while conducting his/her own water quality tests using safe, simple TestTabs® reagent tablets. Students learn the relationships between good and poor water quality while examining the pH, chlorine, hardness, copper, and iron of water from the tap. Incorporates science and math activities. Tablets and sample test bags for 50 students.



Code 3608

**You Might Also Like:**

*Pondwater Tour pg. 28*

*Teach Water Kit pg. 30*

*Test Strips pg. 20*

*Funky Faucet pg. 30*

*Study a  
Watershed  
in the  
Classroom!*

## The Watershed Tour™

Grades 4-8/30 students

Order Code 5419      \$79.00 NH (4)

Reagent Refill R-5419      \$12.75 NH (1)

Can't get your class to a river? Need a meaningful watershed experience? Study a virtual watershed! Through a week-long series of activities students "test" four sites along a river continuum—from the headwaters to the mouth—to study how the river changes, and how human activities influence water quality. Introduce students to stream and river ecosystems through a classroom-based tour of a virtual watershed. The class will learn about stream ecology, water quality issues, and their own connection to a watershed using TesTabs® tablet tests, games, and activities. Incorporates science and math, and geography activities. Includes lecture materials, illustrated handouts, teacher's tips, test procedures, TesTabs® reagents, data sheets, and games. TesTabs® reagents and test tubes for 30 students in groups.



Code 5419

## Pondwater Tour

Grades 4-8/50 students

Order Code 5418      \$72.00   N (4)

Reagent Refill R-5418      52.00   N (1)

Study and measure changes in water quality in any body of water—from lakes to aquariums! The Pondwater Tour is a great classroom introduction into the study and measurement of changes in the water quality of a lake, stream, pond, aquarium, or even a fish bowl. Each student on the Pondwater Tour conducts water quality tests for pH, dissolved oxygen, nitrate, and ammonia using safe, simple TesTabs® reagent tablets. Students investigate natural processes and variables that create changes in water quality over time. Incorporates science and math activities. Tablets and sample test bags for 50 students.



Code 5418

## The Topsoil Tour

Grades 4-8/50 students

Order Code 5425-01      \$72.00   NH (4)

Reagent Refill R-5425-01      57.12   NH (1)

Get the dirt on your dirt! The Topsoil Tour is an exciting classroom investigation into the physical and chemical properties of soil. Each student on the Topsoil Tour completes seven units while conducting his/her own soil tests for soil texture, pH, nitrogen, phosphorus, and potassium using safe, simple TesTabs® reagent tablets. Incorporates math and science activities. Tablets and sample test bags for 50 students.



Code 5425-01

### You Might Also Like:

- NPK Soil Kit pg. 31
- Nitty Gritty Soil Kit pg. 30
- Soil pH Kit pg. 44
- Soil Sampler pg. 44

## Living In Water Curriculum Tote

Grades 5-8

Order Code 5947   \$192.40   R1 (8)

*Living in Water*, a 395 page aquatic science textbook, contains 50 activities to integrate physical, earth, and life science into your classroom. It can be used as a complete curriculum or individual modules of interest can be selected for study. Classroom based, scientific study of water, aquatic environments and the plants and animals that live there. Can be adapted for field studies. For use in any body of water from the ocean to a fish bowl.

Developed by the Department of Education at the National Aquarium in Baltimore, the popular curriculum is now in its third edition. *Living in Water* has documented use in 41 countries and most Canadian provinces.

### Test Kits Included and Also Sold Individually

Factor	Code	Shipping	Range (#Tests)	Price
Dissolved Oxygen	7414	R3	0-10 ppm (50)	\$49.95
Nitrate	3354	NH	0-15 ppm NO <sub>3</sub> -N (50)	52.00
pH	5858	R1	3.0-10.5 (100)	36.75
NutriTabs (50 tablets)	5421A-H	NH		8.85
Armored Thermometer	1066	NH		21.50
<i>Living in Water</i> text only (see page 48)	1598	NH		38.50



Code 5947



Code 5962

## Classroom Studies Series

### Ten Lab Packages for Water & Soil Demonstrations

Grades 5-8

These lab packages are designed to reinforce key concepts introduced in lecture materials on drinking water treatment and water and soil environmental studies. Teacher manual includes tips on organizing the lab demonstration, introductory information on each test factor, and suggestions for additional experiments.

- teacher manual
- introductory information
- student procedures/data sheets (to reproduce)
- lesson plans included
- apparatus and reagents for 5 teams to perform 5 demonstrations each, or a total of 25 demonstrations
- soil samples for all soil units
- reagent composition information
- reagent refills available

Order Code	Description		Shipping	Price	Refill/Refill	Shipping	Price
5962	Water Treatment Lab	Investigate odor, color, and turbidity of drinking water and water treatment processes.	NH (2)	\$73.90	R-5962	NH (1)	\$38.76
5963	Dissolved Oxygen Lab	Demonstrate the importance of dissolved oxygen in natural waters. Create your own samples, relating the importance of temperature to oxygen saturation.	NH (2)	38.15	3976A-H	NH (1)	9.10
5964	Water pH Lab	Learn the importance of pH and how it is adjusted in various water samples. Create your own demonstrations using various household items.	NH (2)	62.45	R-5964	NH (1)	26.52
5965	Soil pH Lab	Determine the soil pH of known samples as well as your own samples.	NH (2)	47.70	R-5965	NH (1)	19.35
5966	Soil Texture Lab	Separate the sand, silt, and clay fractions of a known soil sample. Determine the soil texture of a soil sample from your garden.	NH (2)	40.55	5644WT-H	NH (1)	7.85
5967	Hardness In Water Lab	Measure the hardness of a known sample and demonstrate the aesthetic effects of drinking water.	R1 (2)	79.50	R-5967	R1 (1)	51.00
5968	Soil Nutrients – Nitrate Lab	Review the importance of these nutrients and their affect on plant growth and nutrition. Soil samples included. Each lab sold separately.	R2 (2)	67.00	R-5968	R2 (1)	25.50
5969	Soil Nutrients – Phosphorus Lab		R1 (2)	74.95	R-5969	R1 (1)	35.70
5970	Soil Nutrients – Potassium Lab		NH (2)	74.95	R-5970	NH (1)	40.80
5971	Nutrients in Water Lab	Measure nitrate and phosphate in prepared samples. Learn the importance of these nutrients as pollution indicators.	NH (2)	67.95	R-5971	NH (1)	37.74

## GREEN Low Cost Water Monitoring Kit

Ages 8 and up

Order Code 3-5886 \$35.00 NH (1)

Need to test fresh, brackish or saline water? Designed as a sampler that is a great introduction to any water quality monitoring program. This kit provides hands-on methods using TesTabs®. For long term monitoring, consider the Green Standard Water Monitoring kit, code 5848, on page 7. Both kits are ideal for citizen monitoring, too.

- 8 different test factors: pH, dissolved oxygen, biochemical oxygen demand, temperature, turbidity, nitrate, phosphate, and coliform bacteria
- manual with step-by-step diagrammed instructions in both English and Spanish
- all necessary apparatus
- safe, non-hazardous TesTabs® to test 10 water samples (3 for coliform)
- laminated color chart



Code 3-5886

**English & Spanish Instructions!**

### You Might Also Like:

- Wet Your Waders pg. 7*
- Coliquant MF pg. 21*
- Teach Water Kit pg. 30*
- Tapwater Tour pg. 27*
- Water Treatment Lab pg. 29*
- Funky Faucet pg. 30*
- Science Project Kits pg. 31*

## Urban Water Test Kit

Grades 3 and up

Order Code 5918 \$42.50 NH (1)

Test tap water from any source and study the impact of urban water on the city's environment! "Wet in the City," a hands-on kit, introduces the basic concepts of water chemistry—even to kids as young as third grade! Non-hazardous TesTabs® make "Wet in the City" an easy and safe kit that's also portable! Contains a comprehensive handbook and all necessary equipment to test for the following factors, 10 repetitions each, 5 for coliform bacteria.

### Test Factors

Chlorine	Nitrate
Copper	pH
Dissolved Oxygen	Phosphate
Hardness	Temperature
Iron	Coliform Bacteria



Code 5918



Code 5927

## Teach Water Kit

Ages 8 and up

Order Code 5927 \$46.00 NH (1)

Ideal for municipal and well water investigations, this combo pack of test strips offers the TEACH handbook and one vial each of alkalinity, chlorine, hardness, pH, and nitrate/nitrite strips (50 strips in each vial).

## Funky Faucet Sink Science

Ages 8 and up

Order Code 5914 \$25.50 NH (1)

What's coming out of your funky faucet? Test tap water for pH, chlorine, hardness, copper, and iron. Learn while you laugh with Just for Fun activities including make your own lava lamp and edible experiments like the Pollution Parfait.

- Non-hazardous TesTabs reagents to run 10 tests each
- instructions for 5 simple water quality tests
- test tubes
- word search games
- internet connections

## Nitty-Gritty Soil Science

Ages 8 and up

Order Code 5913 \$25.50 NH (1)

Make friends with earthworms, and discover the importance of composting. This kit is a great introduction to the basic concepts of soil science! Investigate healthy plant requirements for proper soil texture, ideal levels of soil pH, and nutrients. Learn to perform pH, nitrate, phosphate, and potassium soil tests (using non-hazardous TesTab tablet methods). Reagents for 10 tests of each test factor are included.



Code 5913



Code 5914

**Under \$30**



Code 3-5880



Code 5912



### NPK Soil Test Kit

Grades 5 and up

Order Code 3-5880 \$25.50 NH (1)

Specifically designed to meet the needs of the GLOBE Program™, this kit is safe, fun, and can easily ship anywhere!

- 50 tests each for nitrogen, phosphorus, and potassium
- uses non-hazardous TesTabs®
- all necessary apparatus
- simple, diagrammed instructions
- laminated color chart

**You Might Also Like:**  
Teach Water Kit pg. 30

### Soil pH Test Kit

Order Code 5912 \$12.50 NH (1)

By popular demand, TesTabs® method. Companion to Soil NPK kit (Code 3-5880). Simple diagrammed instructions.

- 50 tests for pH
- Wide Range 4-11 in 1.0 pH units
- Distilled or deionized water recommended

### Bugkit

Ages 8 and up

Order Code 3-0030 \$21.65 NH (1)

A creepy-crawly, wet investigation into the health of any freshwater environment. Following the easy-to-read manual, one to two students collect, observe, sort, and identify aquatic insects as a guide for establishing water quality. Students complete the activity at home, or spend an afternoon outdoors beside a stream or pond.

- mesh leaf bags for collection
- trays and plastic dishes for sorting
- magnifying lens
- BUGGUIDE—a bug-by-bug description
- BUGBOARD identification chart
- manual, including activities and games



Code 3-0030

### Science Project Kits™

Grades 3 and up

It's Science Fair time again, and students need a project. Don't panic! These kits will guide them through the entire process, from choosing a subject, doing research, collecting data, and displaying the results. TesTabs®, test tubes, and project ideas are included.



Code 3-5873

Order Code	Description		Shipping	Price
3-5873	pH • Discover The pH of Things Around You	Create an experiment to test household items, and make a pH scale. Topics include acid rain, corrosion, acids and bases. 20 tests.	NH (1)	\$21.50
3-5874	Nitrogen • Find Out About Nutrients In Soil & Plants	Test soil samples for nitrogen, or demonstrate the effects of water pollution while learning about plant nutrition, fertilization, and pollution of lakes and streams. 20 tests.	NH (1)	\$21.50
3-5875	Bacteria • Search For Environmental Bacteria	How is water tested to ensure its safety for drinking and swimming? This kit explains how, and contains three tests for checking water samples for coliform bacteria. 3 tests.	NH (1)	\$21.50
3-5876	Chlorine • Explore Clean Water	Use TesTabs® to measure water samples for safe levels of sanitizers in swimming pools and other water samples. 20 tests.	NH (1)	\$21.50
3-5877	Copper/Iron • Investigate Metals & Corrosion	How does corrosion damage water systems and metal surfaces? Demonstrate corrosion and measure the amount of copper and iron in water samples. 10 tests each.	NH (1)	\$21.50
3-5878	Dissolved Oxygen • Study Oxygen In Water	Dissolved oxygen is important to healthy aquatic environments—find out why! Perform dissolved oxygen tests on water samples and measure the effects of pollution. 10 tests.	NH (1)	\$21.50
3-5879	Hardness • Measure & Learn About Hard Water	Soap scum! Learn how hardness affects water systems, and determine the hardness level of water samples. 10 tests.	NH (1)	\$21.50

Home School/ Science Projects

# Electronic Instrumentation

**Water resistant!**



Code 1766:  
Use separate pH & Conductivity/TDS meters if sample conductivity is less than 200  $\mu$ S. High conductivity readings may result using a combined pH/conductivity/TDS meter in low conductivity samples. Separate meters are available.

## pH TRACER

Order Code 1741 \$98.00 NH (1)

- read pH from 0.00-14.00 pH to 0.01 pH resolution
- supplied with 4, 7, 10 pH buffer tablets
- automatic self calibration to 1, 2, or 3 points
- extra bold display includes analog bar graph feature
- memory can store up to 15 readings
- chlorine and pH modes also display sample temperature
- unit identifies which probe is in use and retains calibrations
- automatic shut-off and Low Battery indicator; uses four LR-44 batteries
- optional total chlorine probe makes unit a true ISE; TCI tablets required

### Optional Accessories

Code	Description	Price
1733	pH Probe; Range: 0-14.00/ $\pm$ 0.01 pH	\$49.60
1734	ORP probe; Range: $\pm$ 999mV/ $\pm$ 4mV	59.55
1732	Cl <sub>2</sub> probe; Range: 0-10.00/ $\pm$ 10% of reading	115.70
1746	Optional weighted stand & 5 sample cups	18.20
7044A-J	Cl tablets, 100 pack	24.80
1745	Sample cups, 24 pack	20.30

## pH/Conductivity TRACER

pH/Conductivity TRACER

Order Code 1766 \$143.00 NH (1)

pH/Conductivity Sensor only

Order Code 1755 \$68.30 NH (1)

- measure 5 parameters including Conductivity, TDS, Salinity, pH and Temperature using one electrode
- units of measure: pH,  $\mu$ S, mS, ppm, mg/L, g/L,  $^{\circ}$ C,  $^{\circ}$ F
- memory stores up to 25 labeled readings
- auto power off and low battery indicator

Description	Range	Resolution	Accuracy
Conductivity	0 to 199.9 $\mu$ S, 200 to 1999 $\mu$ S, 2.00 to 19.99 mS	0.1 $\mu$ S	$\pm$ 1%
TDS/Salinity	0 to 99.9 ppm (mg/L), 100 to 999 ppm (mg/L), 1.00 to 9.99 ppt (g/L)	0.1 ppm (mg/L)	$\pm$ 2%
pH	0.00 to 14.0 pH	0.01 pH	$\pm$ 0.01%
Temperature	32 $^{\circ}$ to 149 $^{\circ}$ F (0 $^{\circ}$ to 65 $^{\circ}$ C)	0.1 $^{\circ}$ F/ $^{\circ}$ C	$\pm$ 1.8 $^{\circ}$ F/ $^{\circ}$ C

## EC/TDS/Salt TRACER

Salt/TDS/Temp TRACER

Order Code 1749 \$89.95 NH (1)

Salt/TDS/Temp Sensor only

Order Code 1765 \$45.75 NH (1)

- easy to use, water resistant design
- 1-2% accuracy for EC, TDS, and salt modules
- automatic temperature compensation
- memory can store up to 15 readings
- auto shut off and low battery indicator
- uses four SR-44W batteries

Description	Range	Resolution	Accuracy
Conductivity	0 to 199.9 $\mu$ S, 200 to 1999 $\mu$ S, 2.00 to 19.99 mS	0.1 $\mu$ S	$\pm$ 1%
TDS/Salinity	0 to 99.9 ppm (mg/L), 100 to 999 ppm (mg/L), 1.00 to 9.99 ppt	0.1 ppm (mg/L)	$\pm$ 2%
Temperature	32° to 149°F (0 to 65°C)	0.1°F/°C	$\pm$ 1.8°F/°C

### Optional Accessories

Weighted Stand w/Sample Cups (5)	Order Code 1746	\$18.20	NH (1)
Sample Cups w/caps (24)	Order Code 1745	20.30	NH (1)
Conductivity Standard, 1413 $\mu$ S, 500 mL	Order Code 6354-L	16.50	NH (1)
Conductivity Standard, 12,880 $\mu$ S, 500 mL	Order Code 6317-L	16.75	NH (1)
pH Buffer Solution (See page 35)			

## Dissolved Oxygen TRACER

Dissolved Oxygen Tracer Order Code 1761 \$325.00 NH (1)

DO Sensor Module Order Code 1762 168.50 NH (1)

- oxygen level displayed as % Saturation from 0 to 200.0% or Concentration from 0 to 20.00 ppm (mg/L)
- adjustable Altitude Compensation (0-20,000 ft in 1,000 ft increments)
- adjustable Salinity Compensation from 0 to 50 ppt
- memory stores up to 25 data sets with DO and Temperature reading
- self-calibration on power up; Data Hold, Auto power off, Low battery indicator
- optional 3 ft (1m) or 16 ft (5m) extension cable
- complete with DO electrode, protective sensor cap, spare membrane cap, electrolyte, four 1.5V SR44W batteries, and 48" (1.2m) neckstrap

Description	Range	Resolution	Accuracy
DO (sat. mode)	0 to 200.0%	0.1%	$\pm$ 2% FS
DO (conc. mode)	0 to 20.00 ppm (mg/L)	0.01 ppm (mg/L)	0.4 ppm (mg/L)
Temp.	32 to 122°F (0 to 50°C)	0.1°F/°C	$\pm$ 1.8°F (1°C)
Dimensions	1.4" x 6.9" x 1.6"		



Code 1764



Code 1761M



Code 1746

### Optional Accessories

DO Membrane Kit (6 screw-on membranes and solution)	Order Code 1761M	\$79.05	NH (1)
Weighted Stand w/ Sample Cups (5)	Order Code 1746	18.20	NH (1)
Sample Cups w/caps (24)	Order Code 1745	20.30	NH (1)
DO Extension Cable (1 meters)	Order Code 1763	52.00	NH (1)
DO Extension Cable (5 meters)	Order Code 1764	83.20	NH (1)

## 2020e Portable Turbidity Meter

Order Code 1979-EPA \$899.00 NH (6)

Perfect for field and laboratory applications, this compact and easy-to-use instrument is an exceptional value. This meter meets or exceeds EPA turbidity testing requirement USEPA 180.1 standard.



- microprocessor control
- auto-ranging over entire 0-4,000 NTU range
- push-button calibration and read buttons
- RS 232 output, 4,000 data points
- optional AC adapter
- 4 optically selected sample vials with screw caps
- 0.0, 1.0 NTU and 10.0 NTU AMCO™
- sturdy carrying case

### Specifications

Instrument Type:	Nephelometric turbidity; calibrated in NTUs
Range:	0-4000 NTU
Resolution:	0.01 from 0-10.99 NTU, 0.1 from 11-109.9 NTU, 1 from 110-4000 NTU
Response Time:	5 seconds
Languages:	English, French, Spanish, Japanese, Italian, Portugese
Accuracy:	$\pm$ 2%
Display:	3.5 digit LCD, Battery and Lamp status
Light Source:	Tungsten filament bulb
Sample Chamber:	Accepts 25 mm diameter flat-bottom, screw-capped, sample tubes
Serial Interface:	RS-232
Power:	Battery Operation: 9V alkaline supplied and one spare battery, optional adapter
Size (LxWxH):	3.4" x 6.4" x 2.6"

# Electronic Instrumentation

## PockeTesters

They float! These waterproof PockeTesters can be intermittently submerged to a depth of 3 feet, and the waterproof feature makes cleanup easy and quick. Replacement electrodes help to reduce long-term costs.

**Waterproof!**



**GLOBE**  
Code 5-0080

**GLOBE**  
Code 5-0082

Code 5-0103

Code 5-0104

### TDS PockeTesters

### EC Conductivity PockeTesters

Model	TDS PockeTester 11 Dual Range
Waterproof	5-0080 • \$77.15
Range	0 to 1,990 ppm, 0 to 10.00 ppt
Resolution	10 ppm, 0.10 ppt
Accuracy	±1%FS
Calibration	Against appropriate calibrating solutions; Single point
Operating Temperature	32 to 122°F; 0 to 50°C
Temperature Compensation	Automatic (ATC) 0 to 50°C
Special Functions	Full reading displayed
Power & Battery Life	Four 1.5V batteries (supplied); 100 hrs. continuous use
Replacement Electrode	5-0084 • \$49.75
Shipping	NH (1)
Size (LxWxH)	8.5" x 2.4" x 2.5" (boxed) 6.5" x 1.5" diameter (unit)

Model	EC PockeTester 11 Dual Range
Waterproof	5-0082 • \$81.00
Range	0-2000 μS, 0-20 mS
Resolution	10 μS, 0.10 mS
Accuracy	±1%FS
Calibration	One-point, push button calibration using buttons inside battery compartment
Operating Temperature	32 to 122°F; 0 to 50°C
Temperature Compensation	Automatic (ATC) 0 to 50°C
Special Functions	Full reading displayed
Power & Battery Life	Four 1.5V batteries (supplied); Eveready A76BP, 100 hrs. use; Eveready 303, 140 hrs use
Replacement Electrode	5-0084 • \$49.75
Shipping	NH (1)
Size (LxWxH)	8.5" x 2.4" x 2.5" (boxed) 6.5" x 1.5" diameter (unit)



## pH Pocket Testers

Model	pH 10	pH 20
Waterproof	5-0103 • \$98.80	5-0104 • \$107.50
Range	-1.0 to 15.0 pH extended range	
Resolution	0.1 pH	0.01 pH
Accuracy	±0.1 pH	±0.01 pH
Calibration	Select up to 3 points (4.0, 7.0, 10.0)	
Operating Temperature	32 to 122°F; 0 to 50°C	
Temperature Compensation	Automatic (ATC) 0 to 50°C	
Special Functions	On/Off or Auto-Off after 8.5 min.; HOLD; CALibrate; CONfirm	
Power & Battery Life	Four 1.5 V alkaline cell batteries (supplied), 500 hours use	
Replacement Electrode	5-0097 • \$68.70	
Size (LxWxH)	8.5"L x 2.4"W x 2.5"H (boxed), 6.5"L x 1.5" diameter (unit)	
Shipping	NH (1)	

## Standardized pH Buffer Solutions

For use in calibration of pH meters. Available in 120 mL (-J) and 500 mL (-L) sizes.

pH Value	Code	Price-J	Price-L
4.00	2866	\$8.45	\$11.95
7.0	2881	8.35	11.80
10.00	2896	8.35	11.80

## Conductivity/TDS Solutions

Value	Code	Price
74 μmohs/cm, 52 ppm	6416-L	\$17.95
718 μmohs/cm, 503 ppm	6417-L	\$17.70
1,413 μmohs/cm, 989 ppm	6354-L	16.50

1 μmohs = μS

## Digital Dissolved Oxygen & Temperature Meter

Order Code 5-0107 \$518.95 NH (3)

Portable hand-held dissolved oxygen meter designed to provide measurements for the most critical water quality parameter. Digital readout provides mg/L, % saturation, and temperature readings by selecting a mode. Features automatic temperature compensation (ATC) for mg/L and % saturation; salinity compensation is manual by direct dial. Meter comes packaged in a convenient carrying case with 2 replacement membrane cartridges, electrolyte, and protective probe storage bottle.

### Optional Accessories

Replacement probe w/3 ft cable	Order Code 5-0129	\$263.00	NH (1)
DO Replacement membranes (2) and electrolyte solution	Order Code 5-0137	58.00	NH (1)

- No meter warm-up required
- Low maintenance probe
- Key in salinity and pressure values manually
- Independent 100% and zero adjustment calibrations
- Offset adjustment capabilities
- Displays electrode diagnostics
- Easily toggle from mg/L (ppm) or % saturation to temperature mode



Code 5-0107

	Range	Resolution	Accuracy
mg/L	0.00 to 20.00 mg/L (ppm)	0.01 mg/L (ppm)	±1.5% FS
% Saturation	0.0 to 200.0%	0.1%	±1.5% FS
Temperature	-0.5 to 150°C	0.1°C	±0.5% FS
Salinity Correction	0.0 to 50.0 ppt	0.1 ppt	Method: Key in manually or automatic correction
Barometric Pressure Correction	500 to 1499 mm Hg	1 mm Hg	Method: Key in manually or automatic correction
Temperature Compensation	Automatic from 0 to 50°C		
Operating Temperature	0 to 50°C		
Probe	Galvanic		
Power	Four 1.5V AA batteries (included), > 700 continuous use		
Dimensions	5.5" L x 2.7" W x 1.3" H		
Weight	1.0 lb (0.45 kg)		

# Electronic Instrumentation



Code 5-0038-01

Model	CON 6 Meter (Conductivity)	TDS 6 Meter (TDS)	CON 6 & TDS 6 (Temperature)
Order Code	w/out case 5-0038-01 • \$310.95 w/case 5-0039-01 • \$390.00	w/out case 5-0036-01 • \$310.95 w/case 5-0037-01 • \$390.00	
Range:	0.0 to 20.00, 200.0, 2,000.0 $\mu$ S 0 to 20.00, 200.0 mS	0.0 to 10.00, 100.0, 1000 ppm 1.00 to 10.00, 100.0, 200 ppt	-10.0 to 110.0°C
Resolution:	0.01, 0.1, 1 $\mu$ S, 0.01, 0.1 mS	0.01, 1, 1.0 ppm, 0.01, 0.1 ppt	0.1°C
Accuracy:	$\pm$ 1% full scale or $\pm$ 1 digit	$\pm$ 1% full scale $\pm$ 0.5°C	$\pm$ 0.5°C
Calibration:	up to 5 points (1 per range) for multi-point calibration; or 1 point for single point for entire range		Offset 0.1°C increments
Temperature Compensation:	Automatic Temperature Compensation (ATC) fixed 2% per °C factor, adjustable 73%		
Power:	4 AAA alkaline batteries (supplied) >60 hours continuous use		
Display:	Single Custom LCD		
Auto shut-off:	After 17 minutes		
Operating Temperature:	32 to 122°F; 0 to 50°C		
Shipping	NH (3)		
Size:	2.8" W x 5.8" H x 1.4" D		

Model	GLOBE pH 5		pH PLUS DIRECT			
	(pH)	(Temperature)	pH	Temperature	Concentration	mV
Order Code	w/out case 5-0034 • \$279.95 with case 5-0035 • \$348.40		pHPLUS Direct meter, liquid buffers (4, 7, 10) w/case Order Code 5-1936 • \$466.95 pH Electrode, gel filled Order Code 1904 • \$88.00 Temperature Probe Order Code 1909 • \$112.60			
Range:	0.00 - 14.00 pH	0.0 - 100.0°C	0.00 to 14.00	0 to 100°C	0.00 to 100	$\pm$ 500mV
Resolution:	0.01 pH	0.1°C	0.01	0.1°C	$\pm$ LSD	$\pm$ 1 mV
Accuracy:	$\pm$ 0.01 pH	$\pm$ 0.5°C	0.01	$\pm$ 0.1°C	$\pm$ 0.5% or $\pm$ 1 LSD	1 mV
Calibration:	Up to 3 Buffer Values (pH 4.01, 7.00, 10.0)	Offset 0.1°C increments	2 or 3 point automatic			
Temperature Compensation:	Automatic Temperature Compensation (ATC)		Automatic Temperature Compensation (ATC)			
Power:	4 AAA alkaline batteries (supplied) >70 hours continuous use		4 AAA alkaline batteries (supplied) >70 hours continuous use			
Display:	Single Custom LCD		Single Custom LCD			
Auto shut-off:	After 17 minutes		After 17 minutes			
Operating Temperature:	32 to 122°F; 0 to 50°C		32 to 122°F; 0 to 50°C			
Electrode:			Epoxy, Ag/AgCl			
Inputs:			1 BNC, Temp probe, power, ref.pin			
Shipping	NH (3)		NH (3)			
Size:	2.8" W x 5.8" H x 1.4" D in.		2.8" W x 5.8" H x 1.4" D in.			

## Optional ISE Electrodes

Although the pHPLUS Direct reads directly in ppm, an initial calibration is required. The standard solution, replacement electrolyte, ionic strength adjustor and pipet are included in the Accessory Kit. The ammonia accessory kit also contains replacement membranes.

## Accessory Kits

Ammonia	Order Code 5-0098	\$154.35
Nitrate	Order Code 5-0100	92.60

## Ion Selective Electrodes

Ammonia	Order Code 5-0043	\$359.80
Fluoride	Order Code 5-0048	377.75
Nitrate	Order Code 5-0052	377.75



## SMART Spectro™ Spectrophotometer

Order Code 2000 \$1,995.00 NH (17)

Easier to use and more accurate than any meter in its price range. Over 80 pre-programmed tests included, 25 user-calibrations can be entered into the memory, and sequences can be customized for frequently run tests.

### Advanced Features

- wide wavelength range
- menu-driven display
- high resolution, exceptional accuracy
- automatic wavelength selection
- unique optical design system using a 1200 lines/mm grating
- pre-programmed tests
- portable supplied with 6 sample tubes (25mm round), 2 sample cell holders (25mm round and COD, 10 mm cuvettes), AC adapter, battery charger, instruction manual including test procedures, and quick start guide

Wavelength Range:	350-1000 nm
Wavelength Accuracy:	±2 nm
Wavelength Resolution:	1 nm
Wavelength Bandwidth:	5 nm (max)
Photometric Range:	0-125%T, -0.1-2.5A
Photometric Accuracy:	±0.005A
Photometric Stray Light:	<0.5 %T
Light Source:	Quartz halogen
Sample Chambers:	25 mm round cell, 10 mm square cuvette UDV, COD, flow-through (optional)
Optical Mount:	Modified Ebert, 1200 grooves/mm ruled grating
Modes:	Conc., %T, ABS
Power:	110/220 volt or battery pack (rechargeable)
Weight:	4.65 kg (10.3 lb)
Size:	13.8" x 11" x 6.7"

*Economical reagent systems!*

Electronic Instrumentation



Code 2000

### Standard Solutions

Test Factor	Size	Conc.	Code	Shipping	Price
Ammonia-Nitrogen	60 mL	100 ppm	3871-H	NH	\$15.35
Chlorine	60 mL	250 ppm	6973-H	NH	7.60
Chlorine	60 mL	1000 ppm	3858-H	NH	9.35
Nitrate-Nitrogen	60 mL	1000 ppm	5392-H	NH	10.60
Phosphate	60 mL	1000 ppm	5393-H	NH	11.80
Sulfate	60 mL	2000 ppm	7120-H	NH	11.85
pH	120 mL	4.0 pH	2866-J	NH	8.45
pH	120 mL	7.0 pH	2881-J	NH	8.35
pH	120 mL	10.0 pH	2896-J	NH	8.35

### Optional Accessories

Description	Order Code	Shipping	Price
Carrying Case	2000-CS	NH (6)	\$118.80
Battery Pack with Holder (rechargeable)	2000-BP	NH (2)	164.25
SmartLink2 Software with cable (See page 38)	1912-CD	NH (2)	185.50
COD Heater Block (for Total N & P analysis)	5-0102	NH (15)	591.75



Code 5-0102

## SMART2 Colorimeter

110V Order Code 1919 \$899.00 NH (4)

220V Order Code 1919-EX2 \$899.00 NH (4)

Does it all! The user-friendly SMART2 Colorimeter is the direct reading colorimeter for complete on-site water analyses. Over 80 pre-programmed tests can be run on this compact instrument and each test features automatic wavelength selection. The entire multi-LED optical system is embedded in the light chamber and optimized for LaMotte test reagent systems. This enables the analyst to select a wavelength and read a reacted sample. The microprocessor, which selects the wavelength, also allows the user to load up to 10 tests for analyzing custom reagent systems. Comes with 4 sample tubes, AC adapter and instruction manual.

*Economical reagent systems!*



Code 1919

### Specifications

Light Source	LED/filter setup at 430nm, 520nm, 570nm, 630nm
Detector	Photodiode
Display	122x32 LCD, 16x4 line graphics display
Range	0-125%T
Resolution	1% FS
Accuracy	2% FS
CE Mark	Yes
Sample Cell	25 mm round cell, 10 mm square cuvette, 16mm COD tubes
Power	9V or AC adapter
Battery Life	500 tests
Datalogging	RS-232, time and date stamped
Calibration	Factory set
Keypad	6-button membrane switch
Size	6" x 3.3" x 2.5"
Weight	11 ounces

### Optional Accessories

Description	Order Code	Shipping	Price
Small Field Carrying Case	1919-CS150	NH (7)	\$105.90
Large Carrying Case	1919-CS440	NH (9)	176.65
COD Adapter	5-0087	NH (1)	26.75
UDV Adapter	5-0086	NH (1)	26.75

## SMARTlink 2 Program & Interface Cable

Order Code 1912-CD \$185.50 NH (1)

Interface the SMART Spectro Spectrophotometer and SMART2 Colorimeter with a Windows based personal computer. The program can be used to download data stored in the dataloggers of the SMART Spectro and the SMART2 Colorimeter. The program allows the user to identify, organize, view, manipulate and store data as a database on a PC. Data can also be copied and pasted or exported to other applications as an ASCII tab delimited text file.



Code 1912-CD



# Electronic Instrumentation



## SMART Spectro & SMART 2 Reagent Systems

Test Factor	Test Method (# of reagents)	SMART Spectro Range ppm	SMART 2 Colorimeter Range ppm	# of Tests	Order Code	Shipping	Price
Alkalinity UDV **	Unit Dose Vial (1)	15-200	10-200	50	4318-H	NH	\$24.10
Aluminum	Eriochrome Cyanine R (4)	0.01-0.30	0.01-0.30	50	3641-SC	NH	67.25
Ammonia Nitrogen (Fresh & Salt Water)	Salicylate (3)	0.02-1.00/ 0.10-1.00	0.05-1.00/ 0.10-1.00	25	3659-01-SC	R2	43.50
Ammonia Nitrogen HR	Nesslerization (2)	0.05-4.00	0.05-4.00	50	3642-SC	R1	37.15
Benzotriazole	UV Photolysis (4)	1-30	1-30	50	4047	R1	93.70
Biquinide	Colorimetric (1)	5-70	7-70	50	4044	NH	23.85
Boron	Azomethine-H (2)	0.05-0.80	0.05-0.80	50	4868	NH	91.50
Bromine LR	DPD Tablets (2)	0.04-9.00	0.1-9.0	100	3643-SC	NH	49.60
Bromine UDV **	Unit Dose Vial DPD (1)	0.3-22.0	0.35-22.00	50	4311-H	NH	24.10
Cadmium	PAN (4)	0.02-1.00	0.025-1.000	50	4017	R1	69.45
Calcium & Magnesium (Total) Hardness UDV **	Unit Dose Vial (1)	10-500	15-400	50	4309-H	NH	24.10
Carbohydrazide	Iron Reduction (3)	0.005-0.900	0.005-0.900	100	4857	R1	20.60
Chloride TesTab	TesTab (1)	0.5-30.0	0.5-30.0	50	3693-SC	NH	25.40
Chlorine	DPD Tablets (3)	0.02-4.00	0.05-4.00	100	3643-SC	NH	49.60
Chlorine - Free UDV **	Unit Dose Vial (1)	0.01-10.00	0.15-10.00	50	4311-H	NH	24.10
Chlorine - Liquid DPD	DPD (3)	0.025-4.000	0.05-4.00	144	4859	R1	20.60
Chlorine - Total UDV **	Unit Dose Vial (1)	0.1-10.0	0.15-10.00	50	4312-H	NH	24.10
Chlorine Dioxide	DPD tablet/Glycine (2)	0.04-7.00	0.1-8.0	50	3644-SC	NH	29.75
Chromium (Hexavalent)	Diphenylcarbohydrazide (1)	0.01-1.00	0.02-1.00	100	3645-SC	HA	29.75
Chromium (Total, Hex & Trivalent)	Diphenylcarbohydrazide (5)	0.03-1.00	0.05-1.00	100	3698-SC	HF	164.25
Cobalt	PAN (3)	0.02-2.00	0.025-2.000	50	4851	HF	49.90
COD LR with Mercury	Digestion (1)	5-150	5-150	25	0075-SC	R1	38.50
COD LR without Mercury	Digestion (1)	5-150	5-150	25	0072-SC	R1	38.50
COD SR with Mercury	Digestion (1)	50-1500	50-1500	25	0076-SC	R1	38.50
COD HR without Mercury	Digestion (1)	50-15,000	500-15,000	25	0074-SC	R1	38.50
COD SR without Mercury	Digestion (1)	500-1500	50-1500	25	0073-SC	R1	38.50
COD HR with Mercury	Digestion (1)	500-15,000	500-15,000	25	0077-SC	R1	38.50
Color	Platinum Cobalt (0)	15-1000	20-1000	∞	NA	NH	-----
Copper BCA - LR	Bicinchoninic Acid (1)	0.05-3.50	0.04-3.50	50	3640-SC	NH	24.80
Copper - Cuprizone	Cuprizone (2)	0.01-2.00	0.03-2.00	50	4023	R1	14.20
Copper DDC	Diethyldithiocarbamate (1)	0.05-6.00	0.05-6.00	100	3646-SC	NH	15.35
Copper UDV **	Unit Dose Vial, Bicinchoninic acid (1)	0.2-4.0	0.5-4.0	50	4314-H	NH	\$24.10
Cyanide	Pyridine-Barbituric Acid (5)	0.05-0.50	0.01-0.5	50	3660-SC	R1	86.00
Cyanuric Acid	Melamine (1)	16-200	10-200	50	3661-SC	NH	36.40

\*Requires COD Heater Block, not included. See page 38 and COD Adapter Code 5-0087. \*\* Requires UDV Adapter 5-0086 and Accessory Package Code 1961 or 1962.



## SMART Spectro & SMART 2 Reagent Systems

Test Factor	Test Method (# of reagents)	SMART Spectro Range ppm	SMART 2 Colorimeter Range ppm	# of Tests	Order Code	Shipping	Price
Cyanuric Acid UDV **	Unit Dose Vial, Melamine (1)	5-150	6-150	50	4313-H	NH	24.10
DEHA	Iron Reduction (3)	0.005-0.700	0.005-0.700	100	4857	R1	20.60
Dissolved Oxygen (DO)	Winkler Colorimetric (3)	0.25-12.00	0.25-11.00	200	3688-SC	R1	36.40
Erythorbic Acid	Iron Reduction (3)	0.02-3.00	0.02-3.00	100	4857	R1	20.60
Fluoride	SPADNS (2)	0.05-2.00	0.05-2.00	50	3647-01-SC	R1	44.10
Hydrazine	P-dimethylaminobenzaldehyde (2)	0.01-0.75	0.01-1.00	50	3656-SC	NH	52.95
Hydrogen Peroxide LR	DPD (2)	0.02-1.50	0.03-1.50	100	3662-SC	NH	36.05
Hydrogen Peroxide HR	DPD (2)	1-60	4-60	50	4045	NH	38.50
Hydrogen Peroxide Shock	DPD (2)	4-225	10-225	100	4045	R2	38.50
Hydroquinone	Iron Reduction (3)	0.01-1.80	0.01-2.00	100	4857	R1	20.60
Iodine	DPD Tablets (2)	0.08-14.00	0.2-14.0	100	3643-SC	NH	49.60
Iron - Bipyridyl	Bipyridyl (2)	0.06-6.00	0.1-6.0	50	3648-SC	R1	36.35
Iron UDV **	Unit Dose Vial Bipyridyl (1)	0.07-10.00	0.2-10.0	50	4315-H	NH	24.10
Iron - Phenanthroline	1,10 Phenanthroline (2)	0.04-4.50	0.08-5.00	50	3668-SC	R1	39.15
Lead	PAR (5)	0.1-5.0	0.1-5.0	50	4031	R1	69.45
Manganese LR	PAN (3)	0.02-0.70	0.02-0.70	50	3658-SC	HF	54.55
Manganese HR	Periodate (2)	0.3-15.0	0.3-15.0	50	3669-SC	R1	74.40
Mercury	TMK (3)	0.02-1.50	0.02-1.50	50	4861	HF	183.75
Methylethylketoxime	Iron Reduction (3)	0.02-3.00	0.02-3.00	100	4857	R1	20.60
Molybdenum HR	Thioglycolate (3)	0.2-15.0	0.5-50.0	50	3699-02-SC	R1	49.60
Nickel	Dimethylglyoxime (6)	0.06-8.00	0.1-8.0	50	3663-SC	HF	95.90
Nitrate Nitrogen LR	Cadmium Reduction (2)	0.05-3.00	0.1-3.0	20	3649-SC	R1	40.65
Nitrate TesTabs	Zinc Reduction (1)	2.5-60.0	5-60	50	3689-SC	NH	25.40
Nitrite Nitrogen LR	Diazotization (2)	0.02-0.80	0.02-0.80	20	3650-SC	NH	40.65
Nitrogen, Total*	Chromotropic Acid/ Digestion (6)	2-25 mg/L	3-25 mg/L	25	4026	R1	103.05
Oxygen Scavengers	Iron Reduction	various	various	100	4857	R1	20.60
Ozone LR	Indigo Trisulfonate (3)	0.02-0.40	0.02-0.40	100	3651-SC	NH	195.00
Ozone HR	Indigo Trisulfonate (3)	0.05-1.50	0.05-2.50	20	3651-SC	NH	195.00
pH CPR (Chlorphenol Red)	Chlorophenyl Red (1)	pH 5.0-7.0	pH 5.0-6.8	100	3700-SC	NH	44.05
pH PR (Phenol Red)	Phenol Red (1)	pH 6.6-8.4	pH 6.6-8.4	100	3700-SC	NH	44.05
pH TB (Thymol Blue)	Thymol Blue (1)	pH 8.0-9.5	pH 8.0-9.6	100	3700-SC	NH	44.05
Phenol	Aminoantipyrine (3)	0.05-6.00	0.05-6.00	50	3652-SC	NH	48.50
Phosphate LR	Ascorbic Acid Reduction (2)	0.04-3.00	0.05-3.00	50	3653-SC	R2	34.35
Phosphate HR	Vanodomolybdovanadate Acid (1)	1-70	1-70	50	3655-SC	R1	19.75
Phosphorus, Total - LR*	Ascorbic Acid/Digestion (5)	0.07-3.50 mg/L	0.1-3.5 mg/L	25	4024	R1	75.00
Phosphorus, Total - HR*	Molybdovanadate/ Digestion (5)	5-100 mg/L	5-100mg/L	25	4025	R1	75.00
Potassium	Tetraphenylboron (2)	0.5-10.0	0.8-10.0	100	3639-SC	R1	51.25
Silica LR	Heteropoly Blue (4)	0.03-2.50	0.05-4.00	100	3664-SC	R1	48.50
Silica HR	Silicomolybdate (3)	1-50	0.5-75.0	50	3687-SC	R1	36.40
Sulfate HR	Barium Chloride (1)	5-100	4-100	100	3665-SC	R1	25.50
Sulfide LR	Methylene Blue (3)	0.02-1.00	0.025-1.500	50	3654-01-SC	R1	57.30
Surfactants	Bromthymol Blue (3)	0.5-8.0	0.75-8.00	100	4876	HF	63.45
Tannin	Tungsto-Molybdophosphoric Acid (2)	0.2-10.0	0.1-10.0	50	3666-SC	R1	45.20
Tolytriazole	UV Oxidation/Dichromate (4)	1-30	1-30	50	4047	R1	93.70
Turbidity	Absorptimetric (0)	2-400 FTU	2-400 FTU	∞	NA	NH	----
Zinc LR	Zincon (6)	0.025-3.000	0.05-3.00	50	3667-SC	HF	98.10

\*Requires COD Heater Block, not included. See page 38 and COD Adapter Code 5-0087. \*\* Requires UDV Adapter 5-0086 and Accessory Package Code 1961 or 1962.

## SMART2 Water Analysis Laboratory

Order Code 1951-01 (110V) HF (37) \$3,010.80  
 Reagent Refill R-1951 HF (10) 425.40

- Measure 24 water quality parameters with this versatile portable lab!
- analyzes test sample color and provides direct readouts for 15 factors
- Direct Reading Titrators provide results for 6 additional factors directly in ppm
- includes digital meters to measure pH, conductivity and TDS
- The SMART<sup>®</sup>2 Colorimeter is programmed to provide direct readouts for over 80 factors using optional reagent packages

### SMART2 Colorimeter Tests

Factor	Test Method	Range (# Test)
Ammonia-Nitrogen	Nesslerization	0-4.0 ppm (50)
Chlorine	DPD	0-4.0 ppm (100)
Bromine	DPD	0-9 ppm (100)
Iodine	DPD	0-14 ppm (100)
Chromium (Hexavalent)	Diphenylcarbohydrazide	0-1.0 ppm (100)
Copper	Diethyldithiocarbamate	0-6.0 ppm (100)
Fluoride	SPADNS	0-2.0 ppm (50)
Iron	Bipyridyl	0-6.0 ppm (50)
Nitrate-Nitrogen	Cadmium Reduction	0-3.0 ppm (20)
Nitrite-Nitrogen	Diazotization/Coupling	0-0.8 ppm (20)
Phosphate	Ascorbic Acid Reduction	0-3.0 ppm (50)
Silica	Heteropoly Blue	0-4.0 ppm (50)
Sulfate	Barium Chloride	0-100 ppm (50)
Sulfide	Methylene Blue	0-3.0 ppm (50)
Turbidity	Absorption (no rgts)	0-400 NTU ( $\infty$ )

### Meters

Factor	Code	Model	Range
pH	5-0034	pH5	pH 0-14
Conductivity	5-0038-01	CON6 CON6	0-1999 $\mu$ S/cm 2.00-19.99 mS
Colorimeter	1919	SMART2	See chart

### Test Factors

Factor	Test Method	Range (# Test)
Alkalinity	Neutralization	0-200 ppm (50 at 200 ppm)
Carbon Dioxide	Neutralization	0-50 ppm (50 at 50 ppm)
Chloride/Salinity	Argentometric	0-200 ppm (50 at 200 ppm)
Dissolved Oxygen	Winkler Method	0-10 ppm (50 at 10 ppm)
Hardness (Calcium, Magnesium, & Total)	Complexometric	0-200 ppm (50 at 200 ppm)

### Also Available

Description	Order Code	Shipping	Price
SMART2 Colorimeter Lab without pH, Cond. Meters	1991	HF (34)	\$1,870.95
Reagent Refill	R-1991	HF (10)	\$405.60

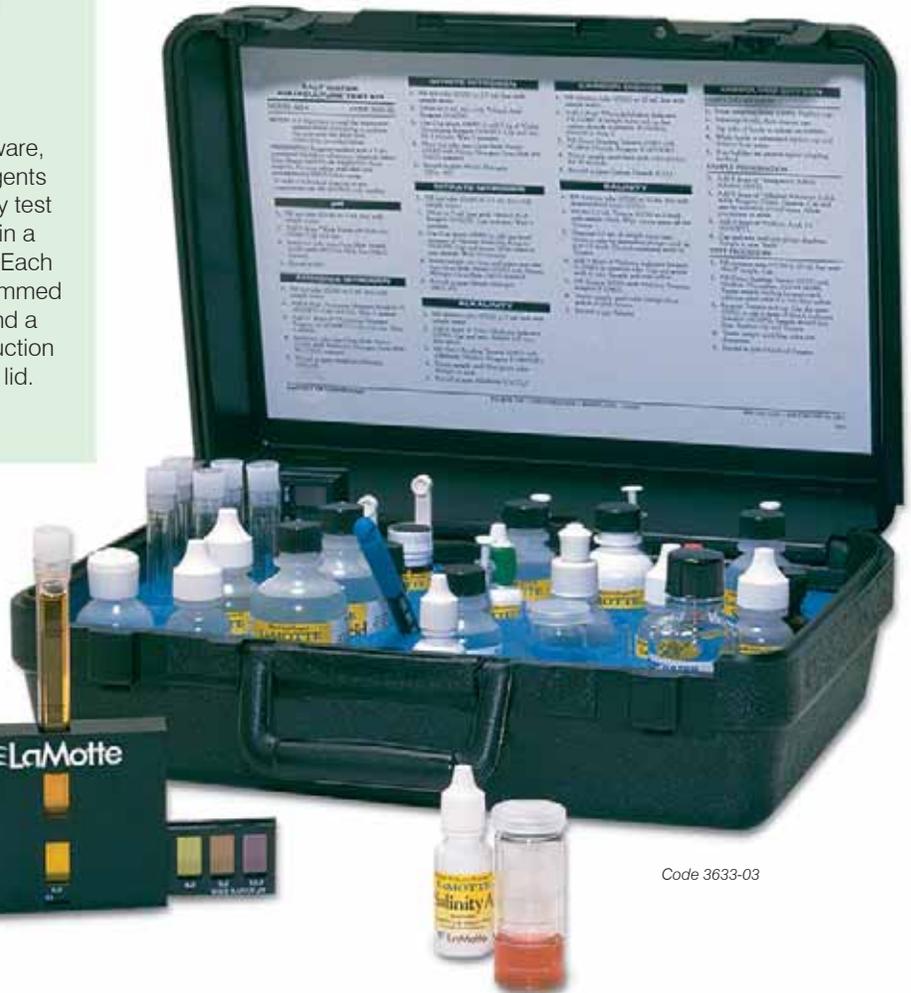


Code 1951-01

# Aquarium/ Aquaculture

## Every Classroom Should Have An Aquarium!

All the necessary labware, accessories, and reagents for 50 tests of each key test factor are contained in a rugged carrying case. Each outfit provides a diagrammed instruction manual and a handy short form instruction mounted in the case lid.



Code 3633-03

### Salt Water Outfit

Grades 6 and up

Order Code 3635-03      \$285.00 R2 (10)  
Reagent Refill R-3635-03      143.85 R2 (4)

Contains equipment necessary to monitor the 9 parameters most critical to the salt water analyst. Same packaging as shown, with 50 tests for each factor.

#### Octa-Slide Comparator Tests

Factor	Test Method	Range (# Tests)
Ammonia Nitrogen	Salicylate	0.0-2.0 ppm (50)
Nitrate Nitrogen	Cadmium Reduction	0.25-10.0 ppm (40)
Nitrite Nitrogen	Diazotization/ Coupling	0.05-0.8 ppm (50)
pH	Wide Range	5.0-10.0 (50)

#### Direct Reading Titrator Tests

Factor	Test Method	Range (# Tests)
Alkalinity	Neutralization	0-200 ppm (50)
Carbon Dioxide	Neutralization	0-50 ppm (50)
Dissolved Oxygen	Winkler Method	0-10 ppm (50)
Salinity	Argentometric	0-20 ppt (50)

#### Temperature

Factor	Range
Armored Thermometer	-5° to 45°C

### Fresh Water Outfit

Grades 6 and up

Order Code 3633-03      \$235.00 R3 (10)  
Reagent Refill R-3633-03      132.60 R3 (4)

Healthy aquariums require routine water quality tests to maintain proper water balance. This outfit contains all you need!

#### Octa-Slide Comparator Tests

Factor	Test Method	Range (# Tests)
Ammonia Nitrogen	Nessler	0.2-3.0 ppm (50)
Nitrite Nitrogen	Diazotization/ Coupling	0.05-0.8 ppm (50)
pH	Wide Range	5.0-10.0 ppm (50)

#### Direct Reading Titrator Tests

Factor	Test Method	Range (# Tests)
Alkalinity, Total	Neutralization	0-200 ppm (50)
Carbon Dioxide	Neutralization	0-50 ppm (50)
Chloride	Argentometric	0-200 ppm (50)
Dissolved Oxygen	Winkler Method	0-10 ppm (50)
Hardness (Total)	Complexometric	0-200 ppm (50)

#### Temperature

Factor	Range
Armored Thermometer	-5° to 45°C



Code 5928



Code 5938-01



## Soil Macronutrients

Grades 6 and up

Order Code 5928 \$399.00 HF (17)

Reagent Refill R-5928 202.00 HF (7)

Learn the preparation, extraction, and filtration techniques and procedures developed specifically for the testing of soil nutrients. This is a comprehensive introduction to the study of soil properties.

- an easy-to-use soil sampling tube
- soil sampling bags
- Soil Texture Unit
- individual test modules for 4 important soil test factors

### Octet Comparator

Factor	Range	# Tests
pH	3.8 -9.6	40

### Color Chart

Factor	Range	# Tests
Nitrogen	10-150 lb/acre	50
Phosphorus	10-200 lb/acre	50

### Turbidity Column

Factor	Range	# Tests
Potassium	100-400 lb/acre	30

### Accessories

Description	Code	# Tests
Soil Texture Unit	1067	50
Soil Sample Bags	0615-J	50
Soil Sampling Tube	1055	50



## Soil Micronutrients

Grades 6 and up

Order Code 5938-01 \$489.00 R1 (19)

Reagent Refill R-5938-01 271.00 R1 (5)

A great supplement to the Soil Macronutrients Outfit, that includes individual test modules for 9 test factors.

### Color Chart

Factor	Range	# Tests
Aluminum	5-150 ppm	50
Ammonia	5-150 ppm	50
Calcium	150-2800 ppm	50
Chlorides	25-500 ppm	50
Iron	5-125 ppm	50
Magnesium	5-150 ppm	50
Manganese	4-40 ppm	50
Nitrite	1-50 ppm	50
Sulfate	50-200 ppm	50





Code 3-5880



Code 5912



## NPK Soil Test Kit

Grades 5 and up

Order Code 3-5880 \$26.00 NH (1)

Specifically designed to meet the needs of the GLOBE Program™, this kit is safe, fun, and can easily ship anywhere!

- 50 tests each for nitrogen, phosphorus, and potassium
- uses non-hazardous TesTabs®
- all necessary apparatus
- simple, diagrammed instructions
- laminated color chart

## Soil pH TestTabs® Kit

Order Code 5912 \$12.50 NH (1)

TesTab® kit for measuring pH. Ideal for younger students and teachers who would like an alternative to liquid pH indicators. Ideal companion to Soil NPK kit (Code 3-5880).

- Simple diagrammed instructions
- Laminated color chart
- 50 tests for pH
- Wide Range 4-11 in 1.0 pH units
- Distilled or deionized water recommended

## Soil Sampling Bags

Order Code 0615-J \$39.75 NH (1)

Directions printed right on the bag explain how to collect and to prepare soil samples! The 6 x 4 inch (15 x 10 cm) plastic zipper bags prevent contamination or accidental mixing of samples ensuring accurate test results. Package of 100.

Code 1055



## Soil pH Test Kit

Order Code 5024 \$14.85 NH (1)

Reagent Refill 2221-F 6.25 NH (1)

Our most popular pH soil kit. Supplied with a color chart and plastic spot plate. pH affects all mineral elements and the biological process made available to plants from the soil. Accurate pH testing is essential to determine lime requirements and to insure that a mineral-rich soil is also a fertile one. 100 tests.



Code 5024



## Soil Sampling Tube

Order Code 1055

\$29.50 NH (2)

A 12" galvanized steel sampler with a 1" core diameter, saw-toothed tip. A cut-away side allows examination of core prior to removal for testing.

## Soil Texture Unit

Order Code 1067 \$58.25 NH (2)

Reagent Refill 15.05 NH (1)

R-1067

A great kit for testing and demonstrating different soil textures and properties. Students test soil from the schoolyard, or can compare soil samples brought from home. 50 tests.



Code 1067

## Spot Plate

Order Code 2-2537

\$25.80 NH (2)

Glazed porcelain throughout except bottom surface. The 112 x 92 mm plate is 7 mm thick and has 12 wells, 5 mm deep.



Code 2-2537



Code 0615-J



## Garden Guide Kit

Grades 5 and up

Order Code 5679 \$51.95 R2 (4)

Reagent Refill R-5679 48.00 R2 (3)

Daffodils drooping? Spinach looking sad? Need to test your garden soil? Use this simple economical kit to measure nitrogen, phosphorus, potassium (15 tests each), and soil pH (30 tests).

- diagrammed instructions
- laminated color charts
- Garden Guide manual
- *LaMotte Soil Handbook*
- *A Study Of Soil Science*



Code 5679

## Plant Tissue

Plant tissue testing provides essential information concerning plant use of nutrients vital to their growth. These kits indicate if growing plants are receiving adequate amounts of available nutrients from the soil.



Code 5026

## Plant Macronutrient Kit

Grades 6 and up

Order Code 5026 \$97.75 HF (3)

Reagent Refill R-5026 88.00 HF (2)

Students perform colorimetric tests for nitrogen, phosphorus and potassium from plant tissue liquid extracts. Quantitative results given as abundant, adequate and deficient only. 50 tests/factor.

### Colorimetric Tests

Nitrogen	Phosphorus	Potassium
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## Plant Micronutrient Kit

Grades 6 and up

Order Code 5261 \$108.00 R1 (3)

Reagent Refill R-5261 99.95 R1 (2)

Students extract sap onto filter paper from freshly cut plant tissue, then perform color spot tests for boron, copper, ferrous and ferric iron, manganese, and zinc. Indicates presence/absence only. 50 test per factor, 25 for Boron.

### Color Spot Tests

Boron	Copper	Ferrous/Ferric Iron	Manganese	Zinc
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Code 5940

## Plant Nutrition Solutions

Grades 6 and up

Order Code 5940 \$83.75 R2 (7)

Contains 10 stock solutions of macronutrients and trace elements—sufficient to prepare five liters of each mixture. Includes *Plant Nutrition Studies* handbook.



Code 3561



## Hydroponics

Hydroponics is an exciting way to study plant growth and nutrition! Each hydroponics test kit comes with enough reagents for 50 tests per test factor, complete labware, and the helpful *Plant Nutrition Studies* handbook.

### Hydroponics 4-Way Kit

Grades 6 and up

Order Code 3561      \$285.00    HF (7)  
 Reagent Refill R-3561      92.92    HF (3)

Maintain proper nutrient balances and achieve optimum growing conditions in soil-less cultures. An abbreviated version of our popular Hydroponics Combination Kit (5406).

- offers tests for pH and three key nutrient factors: nitrogen, phosphorus, and potassium
- sufficient reagents for 50 tests per factor
- complete labware in a sturdy case
- Plant Nutrition Studies handbook

### Octa-Slide Comparator Tests

Factor	Range	# Tests
pH	4.5-8.0	50
Phosphorus	3-30 ppm	50
Nitrate Nitrogen	5-200 ppm, by dilution	50



### Hydroponics Lab

Grades 6 and up

Order Code 5406    \$555.00    HF (15)

Our rugged field carrying case is transformed into a classroom laboratory! Students use a variety of testing techniques and procedures by performing 9 key tests for hydroponic solutions. Outfit also includes a detailed instruction manual.

### Octet Comparator Tests

Factor	Range	# Tests
pH	4.8-7.6	144
Nitrate	5-200 ppm	50
Ammonia	1-8 ppm	90
Phosphorus	3-30 ppm	60
Sulfate	0-200 ppm	50

### Direct Reading Titrator Tests

Factor	Range	# Tests
Calcium	0-2000 ppm	60
Magnesium	0-1200 ppm	60

### Spot Test

Iron	at 0.25 ppm	200
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### Turbidity Test

Potassium	0-250 ppm	100
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Code 5406

## Portable Air Sampling Pump

LaMotte's Model BD Air Sampling Pump is durable and simple to use. The diaphragm vacuum pump draws the air sample through the absorbing reagent in the impinger. A constant rate can be maintained (between 0 and 2.0 liters per minute) and an integral flowmeter controls the amount of air sampled. Operates up to 48 hours on 4 size "C" batteries.

- optional AC adapter is available
- pump includes a general purpose
- impinger

Portable Air Sampling Pump	Order Code 1949	NH (7)	\$714.40
Carrying Case	Order Code 1705	NH (5)	90.45
Optional 110 AC Adapter	Order Code 1744	NH (1)	29.60
Optional 220/50Hz AC Adapter	Order Code 1778	NH (1)	60.80

## Combination Air Quality Testing Outfit

Grades 6 and up

Combination Air Quality Testing Outfit	Order Code 5960-P	HF (23)	\$1,545.00
Outfit without Air Sampling Pump	Order Code 5960	HF (18)	940.00
Reagent Refill	Order Code R-5960	HF (4)	247.00

Contains all the necessary components to measure 6 key pollutants in air: sulfide, ammonia, carbon monoxide, chlorine, nitrogen dioxide, and sulfur dioxide.

- portable air sampling pump in its own carrying case
- 3 types of impingers
- individual test modules with all necessary labware and reagents for 25 tests
- detailed instruction manual

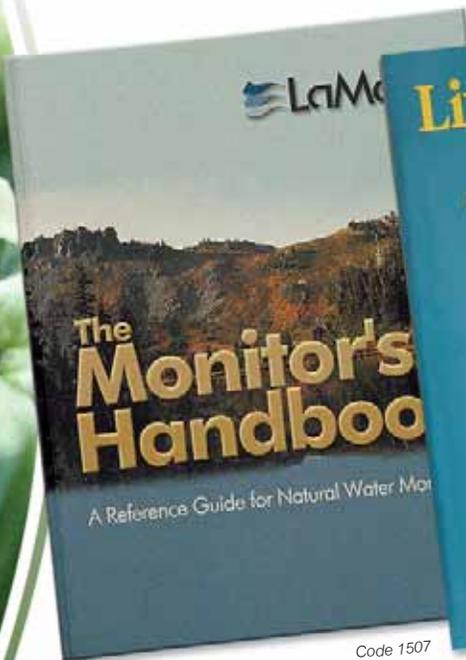


Code 1949



Code 5960-P

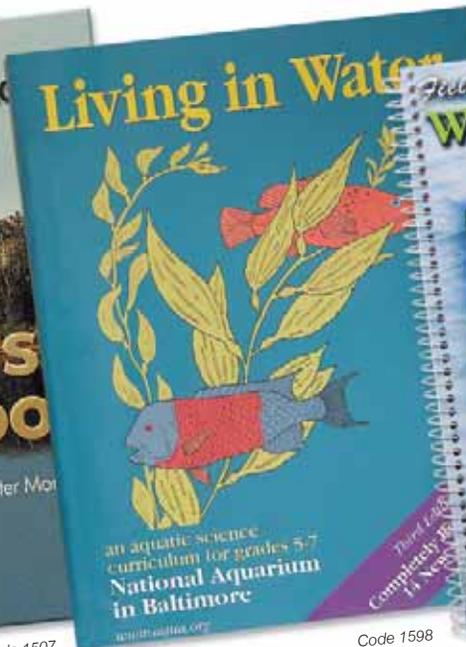




Code 1507

**The Monitor's Handbook**  
A Reference Guide for Natural Water Monitoring  
Staff, LaMotte Company  
Order Code 1507 \$14.30

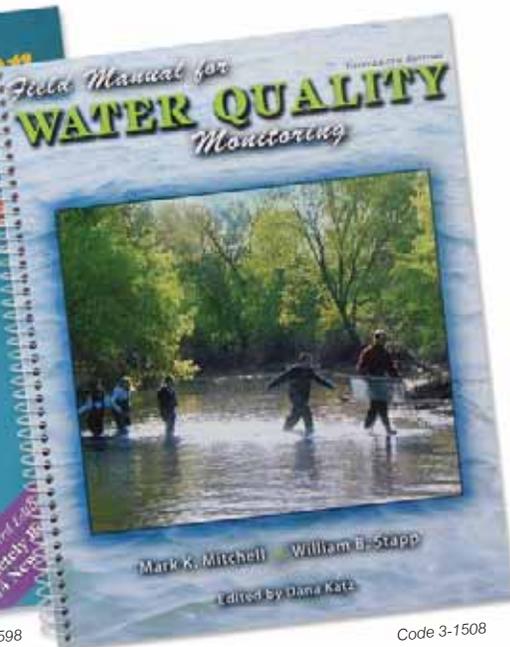
A valuable water quality analysis reference guide, providing comprehensive overviews of monitoring streams, lakes, rivers, and estuaries. Includes physical, biological and chemical factors of water quality, and analytical procedures for their measurements. The basics of waterway surveying, program planning, data reporting and analyzing are also described. 71 pages.



Code 1598

**Living in Water**  
Department of Education at the National Aquarium in Baltimore  
Order Code 1598 \$38.50

An aquatic science textbook containing 50 activities that integrate physical, earth, and life science. It can be used as a complete curriculum or individual activities. Classroom based scientific studies of water, aquatic environments and the plants and animals that live in water. Field studies can be adapted for use in any body of water from the ocean to a fish bowl. 395 pages.



Code 3-1508

**Field Manual for Water Quality Monitoring**  
Mark K. Mitchell, William B. Stapp  
Order Code 3-1508 \$38.50

The *Field Manual for Water Quality Monitoring* (13th edition) by Mark Mitchell and William Stapp, serves as the standard text for school-based water quality monitoring programs in schools around the world. The manual describes nine water quality tests: dissolved oxygen, fecal coliform, pH, total solids, total phosphorus, nitrates, turbidity, biochemical oxygen demand, and temperature. The manual also includes chapters on heavy metals testing, land use practices, and computer networking. The current edition specifically features LaMotte water quality test kits.

### A Study Of Soil Science

Dr. Henry D. Foth

Order Code 1530 \$6.25

An introduction to soil formation, soil pH, mineral elements, plant nutrition, the life cycle of growing plants, and soil fertility management. 44 pages.

### The LaMotte Soil Handbook

Staff, LaMotte Company

Order Code 1504 \$6.50

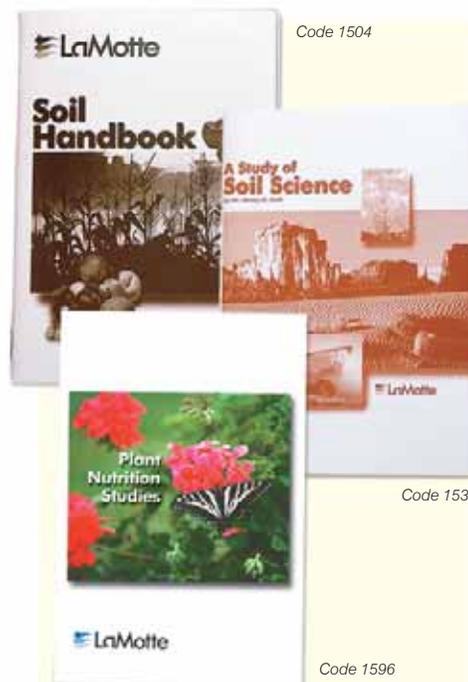
A manual for both "growers" and soil investigators! Provides information on major and minor nutrients, trace elements, soil pH, organic matter, and soil texture. Also includes lime and fertilizer recommendations for a variety of crops and plants. 60 pages.

### Plant Nutrition Studies

Dr. Robert Stegner

Order Code 1596 \$8.00

A study of hydroponics. Includes a series of laboratory procedures and open-ended investigations. 76 pages.



Code 1504

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## Limnology: An Introduction To The Fresh Water Environment

William H. Amos

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A concise handbook dealing with biological, chemical, and physical processes of fresh water including stream dynamics, plant zonation, energy cycle of ponds, and much more. 40 pages.

## Investigating Water Problems

Dr. Charles E. Renn

Order Code 1589 \$7.25

A comprehensive handbook describing 25 water quality test factors including analytical procedures, test result interpretation, illustrations and helpful glossary. 72 pages.

## Our Environment Battles Water Pollution

Dr. Charles E. Renn

Order Code 1592 \$7.25

Follow a theoretical river from its origin to its discharge. Includes discussion of the chemical and biological changes that occur as the river reacts to impurities from natural and industrial sources. 32 pages.

## A Study Of Water Quality

Dr. Charles E. Renn

Order Code 1532 \$6.25

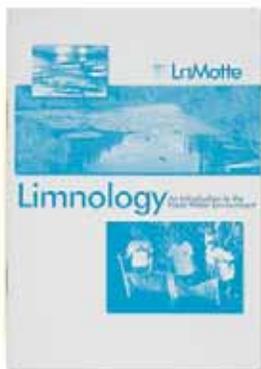
Examines in depth the life cycle of water from natural occurrences to treatment for domestic/industrial use. Emphasizing problems such as scaling, corrosiveness, taste, and turbidity. 46 pages.

## A Laboratory Manual For Marine Science Studies

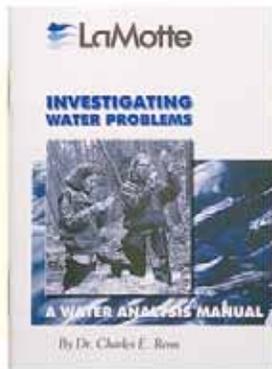
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Order Code 1587 \$7.25

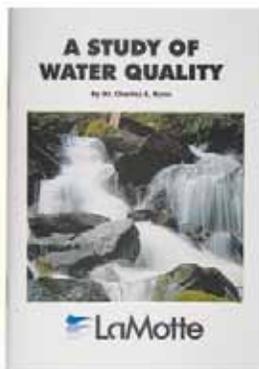
A detailed guide of sampling procedures and water quality analysis in salt water environments, including description of reagents, labware, and test procedures. 32 pages.



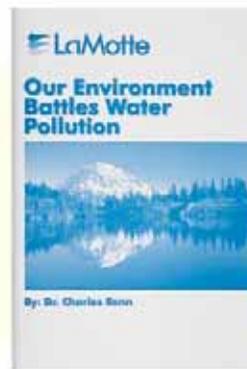
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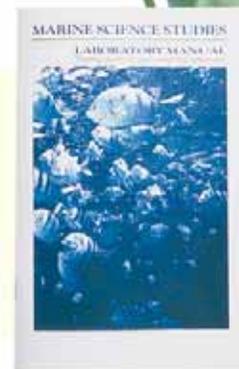
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Code 1592



Code 1587

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Reagent Refills Parts & Accessories

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# Photo Contest

The LaMotte Company Science Education **Photo Contest** is an opportunity to **win FREE LaMotte equipment** for your school, educational program or volunteer monitoring group.

Many winners appear in upcoming LaMotte catalogs and publications, or on the website. Please read and follow the guidelines below when planning and submitting your entry.



- Photo(s) must show current LaMotte testing products being properly used by students in the classroom, lab, or outdoors. Safety equipment must be worn when applicable.
- Please indicate a brief description of how LaMotte products are used in your program.
- Photo(s) should be good quality black and white, color slides, or color prints (please include negatives). Digital files should be high resolution (300 ppi) and supplied on disk or CD. All submissions must be accompanied by a completed entry form and signed photo release. Call LaMotte or visit our website [www.lamotte.com](http://www.lamotte.com) for entry and release forms.
- Submissions must reach the LaMotte Company advertising office by the Friday after Thanksgiving to be eligible for prizes.
- Prizes will only be awarded to educational institutions and organizations.
- All submissions become the property of LaMotte Company. Please send original photos (please include negatives, if possible), slides or hi-res digital photos. Make copies for your use before submitting. Sorry, but submitted photos and slides cannot be returned.
- Winners will be notified by the end of February.
- All prizes are merchandise certificates for LaMotte equipment.

## Prizes

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**Second place** **\$250**  
Merchandise Certificate

**Third place** **\$100**  
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**3 Honorable Mentions:**  
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#### Disclaimer

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*What's the matter Tom? "Something that can be neither created nor destroyed." In memory of our dear friend and coworker.*

